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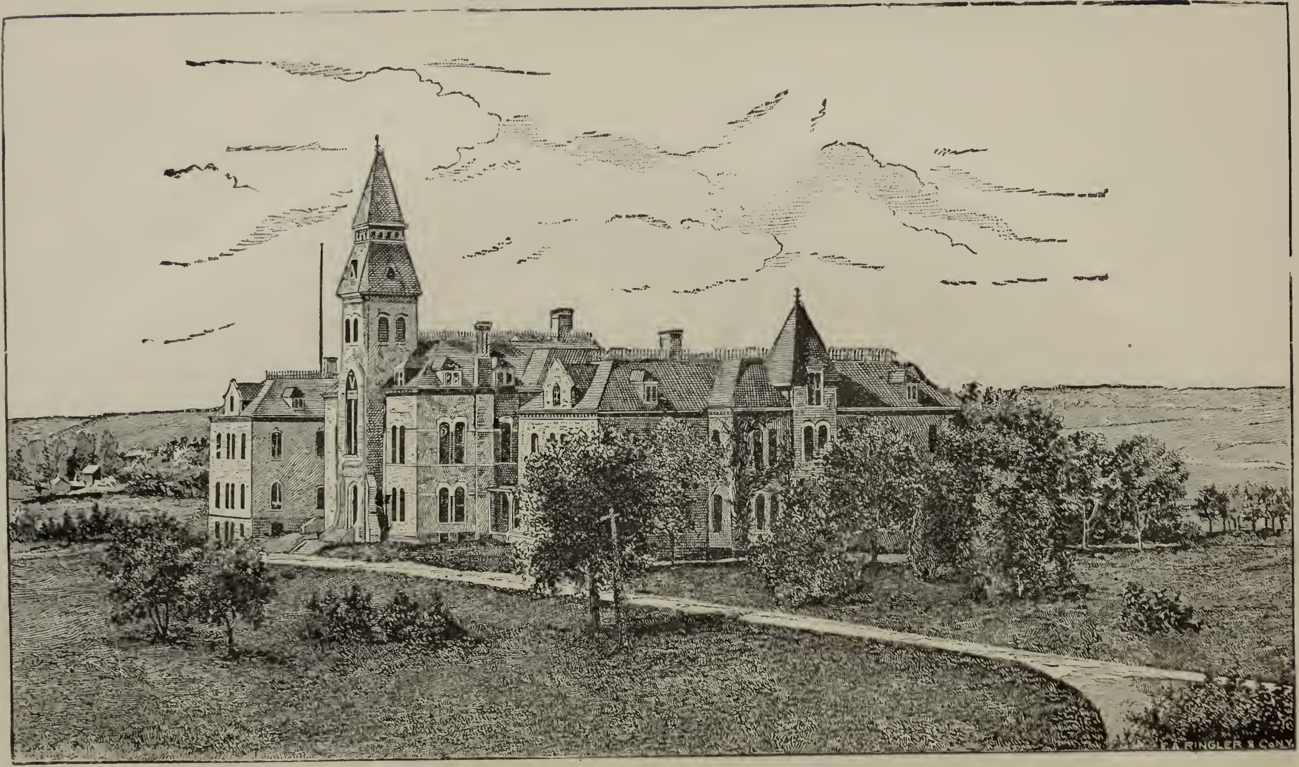
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Naomi Van Pelt,	Paola, Miami.
Thomas J. Vincent,	Rossville, Shawnee.
Luella Warner,	Eureka Lake, Riley.
Porter E. Westgate,	Manhattan, Riley.
Arthur L. Whaley,	Manhattan, Riley.
William G. White,	Fredonia, Wilson.
Clara B. Whitelock,	Bluff, Harper.
Emery D. Whitelock,	Bluff, Harper.
Louis E. Whitelock,	Bluff, Harper.
Jessie Whitford,	Manhattan, Riley.
Nathaniel G. Whittet,	St. Marys, Pottawatomie.
Augustus M. Wilkes,	Dwight, Morris.
Elizabeth Willey,	Stockdale, Riley.
Ivan W. Williams,	Glasco, Cloud.

Christopher Wilson,	Glasco, Cloud.
Ethel E. Wood,	Topeka, Shawnee.
Zealous E. Wright,	Kenneth, Sheridan.
Lenora P. Wycoff,	Manhattan, Riley.
Nettie Wycoff,	Manhattan, Riley.
Nellie M. Wylie,	Manhattan, Riley.
Isaac M. Zimmerman,	Troy, Doniphan.

NUMBER OF STUDENTS.

Classes.	*Gentlemen.*	*Ladies.*	*Total.*
Post-graduate,	6	1	7
Fourth-year,	19	9	28
Third-year,	30	11	41
Second-year,	56	47	103
First-year,	156	110	266
Total,	267	177	445

From 55 counties of Kansas, 419; from 12 other States, 26; applicants not enrolled, 36.

The average age of enrolled students is nearly nineteen and one-half years.

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TERMS AND VACATIONS.

FALL TERM, 1889.

Wednesday, September 11th.—Examination for admission, at 9 A. M.

Thursday, September 12th.—College year begins.

Friday, October 25th.—Examination.

Thursday, December 19th.—Annual Exhibition of the Alpha Beta Society.

Thursday and Friday, December 19th and 20th.—Examination at close of Fall Term.

December 21st to January 6th.—Winter Vacation.

WINTER TERM, 1890.

Monday, January 6th.—Examination for admission, at 9 A. M.

Tuesday, January 7th.—Winter Term begins.

Saturday, February 1st.—Annual Exhibition of the Hamilton Society.

Friday, February 14th.—Examination.

Thursday, March 27th.—Annual Exhibition of the Webster Society.

Thursday and Friday, March 27th and 28th.—Examination at close of Winter Term.

SPRING TERM, 1890.

Monday, March 31st.—Spring Term begins.

Friday, May 2d.—Examination.

Monday and Tuesday, June 9th and 10th.—Examination at close of year.

June 8th to 11th.—Exercises of Commencement Week.

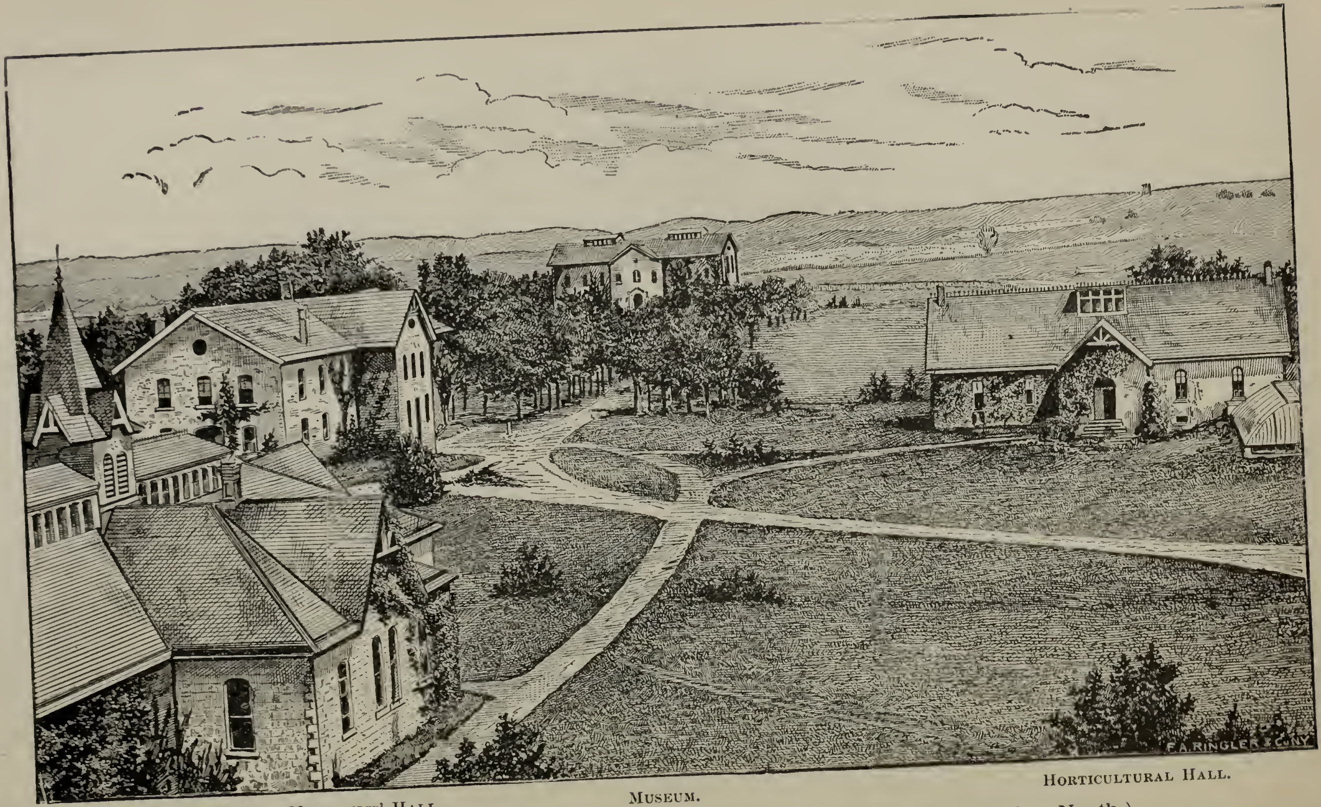
Wednesday, June 11th, 10 A. M.—Commencement.

June 12th to September 10th.—Summer Vacation.

FALL TERM, 1890.

Wednesday, September 10th.—Examination for admission, at 9 A. M.

Thursday, September 11th.—College year begins.


F. A. RINGLER & Co. N.Y.

Chemical Laboratory. Mechanics' Hall. Museum. Horticultural Hall.

KANSAS STATE AGRICULTURAL COLLEGE. (View from Main Building North.)

OBJECTS AND METHODS.

ENDOWMENT AND RESOURCES.

An act of Congress, approved July 2d, 1862, gave to each State public lands to the amount of 30.000 acres for each of the Senators and Representatives in Congress according to the census of 1860, for the "endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, ... in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Under this act the State of Kansas received 82,313.53 acres of land, and, in 1863, established the State Agricultural College, by endowing with these lands Bluemont College, which had been erected two miles from Manhattan under the auspices of the M. E. Church, but was presented to the State for the purpose named in the act of Congress. These lands have been sold, giving a fund of $501,436.33, which is by law invested in bonds, the interest alone being used for the current expenses of the College.

In 1873 the College was reörganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 215 acres, one mile from the city of Manhattan. On this fine location the State has erected buildings valued at $130,000, of which a description is given elsewhere. The farm and grounds, furniture, stock, and other illustrative apparatus are valued at over $115,000.

The annual income from the endowment fund — about $32,000 — meets all the expenses of instruction; the State provides, as the law requires, for the necessary buildings and expenses in management of funds.

Under an act of Congress, approved March 7th, 1887, the College receives, by general appropriation in Congress, $15,000 each year for the maintenance of an Experiment Station "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science."

OBJECTS.

This College now accomplishes the objects of its endowment in several ways:

First, it gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second, it teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, botany, entomology, zoölogy, and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants, and animals themselves illustrates and fixes the daily lessons. At the same time, lessons in agriculture, horticulture, and household economy show the application of science; and all are enforced by actual experiment.

Third, it trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm, and household department is made a part of a general education to usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth, it strives to increase our experimental knowledge of agriculture and horticulture. The provision for extensive and accurate researches made by establishing the Experiment Station as a distinct department of the College, offers assurance of more definite results than can be obtained by ordinary methods. The Professors of Agriculture, Horticulture, Chemistry, Botany, and Veterinary Science, together with the President of the College, form the Experiment Station Council, by authority of which experiments are undertaken and carried on in the several departments, under the special supervision of the Professors. These touch "the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

The bulletins of the Station, issued at least as often as once in three months, are sent, according to law, free of postage, to all newspapers in the State, and "to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." Correspondence with reference to bulletins and experiments is welcomed, and may be addressed to the several members of the Council.

Fifth, it seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose it publishes the weekly *Industrialist.* Its officers also share in the debates and consultations of farmers and horticulturists throughout the State. Each winter a series of ten Farmers' Institutes is held in as many different counties of the State. In these the Faculty share with the people in lectures, essays, and discussions upon topics of most interest to farmers. These institutes have brought the College into more direct sympathy with the people and their work, so as to make possible a more general dissemination of the truths presented; and permanent organizations for the same purpose in many counties are increasing. Correspondence upon such questions is invited by all members of the Faculty, and applications for institutes are desired from all parts of the State.

COURSE OF STUDY.

The necessity for so adjusting various branches of a course of study that there shall be as little waste as possible in acquiring both information and discipline, is felt by every teacher. Such a course is not designed to be absolutely inflexible, but to guide the judgment into some definite line of progress from which no mere whim shall turn a student aside.

Each student is expected to take three studies besides one hour's practice in an industrial art; and variations from this rule can be made only with the consent of the Faculty.

Parallel courses are offered to both sexes, with such differences as their necessities seem to call for. The following gives the general scope of the two, but fuller explanations are found under OUTLINE OF INSTRUCTION:

FIRST YEAR.

FALL TERM: Arithmetic.
English Analysis.
Geometrical Drawing.
Industrial.

WINTER TERM: Book-keeping.
English Structure.
United States History.
Free-hand Drawing three times a week.
Industrial.

SPRING TERM: Algebra.
English Composition.
Botany.
Industrial (Carpentry or Sewing).

SECOND YEAR.

FALL TERM: Algebra completed.
Elementary Chemistry.
Horticulture.
Industrial.

WINTER TERM: Geometry.
Agriculture or Household Economy.
Organic Chemistry and Mineralogy.
Twelve lectures in Military Science.
Industrial (Cooking).

SPRING TERM: Geometry Completed, Projection Drawing.
Entomology.
Analytical Chemistry.
Twenty lectures in Military Science.
Industrial (Farm and Garden or Dairy).

THIRD YEAR.

FALL TERM: Trigonometry and Surveying.
Anatomy and Physiology.
General History.
Industrial (Farm and Garden).

WINTER TERM: Mechanics.
Agricultural Chemistry.
Rhetoric.
Industrial.

SPRING TERM: Civil Engineering or Hygiene.
Physics.
English Literature.
Perspective Drawing two hours a week.
Industrial.

FOURTH YEAR.

FALL TERM: Agriculture or Literature.
Physics and Meteorology.
Psychology.
Industrial.

WINTER TERM: Logic, Deductive and Inductive.
Zoölogy and Veterinary Science.
Structural Botany.
Industrial.

SPRING TERM: Geology.
United States Constitution.
Political Economy.
Industrial.

CLASS HOURS, 1889-90.

	HOURS.	FIRST YEAR.				SECOND YEAR.		THIRD YEAR.	FOURTH YEAR.
FALL TERM, Fourteen weeks.	I.	Drawing.	Arithmetic.	English.	Industrials.	Horticulture.	Algebra.	General History.	Meteorology.
	II.	Book-keeping.	English.	Industrials.	Drawing.	Algebra.	Horticulture.	Physiology.	Industrials.
	III.	Industrials.	Botany.	Arithmetic.	English.	Industrials.	Chemistry.	Industrials.	Psychology.
	IV.	English.	Industrials.	Drawing.	Arithmetic.	Chemistry.	Industrials.	Trigonometry and Surveying.	Agriculture. Literature.
	V.	Drill or Industrials.				Chemical Practice.	Chemical Practice.	Surveying Practice.	
WINTER TERM, Twelve weeks.	I.	English Structure.	Algebra.	Industrials.	U. S. History.	Agriculture.	Household Economy.	Mechanics.	Zoölogy.
	II.	Arithmetic.	U. S. History.	Book-keeping.	English Structure.	Industrials.	Geometry.	Agricultural Chemistry.	Structural Botany.
	III.	Industrials.	English Structure.	Drawing 3 times a week.	Book-keeping.	Geometry.	Chem. 6 weeks. Mineralogy.	Mechanics.	
	IV.	Book-keeping	Industrials.	U. S. History.	Drawing 3 times a week.	Chem. 6 weeks. Mineralogy.	Blowpipe Analysis.	Rhetoric.	Logic.
	V.	Drill.	Drawing 3 times a week.		Industrials.	Military Sci. Blo'pipe Anal.	Industrials.	Industrials.	Industrials.
SPRING TERM, Eleven weeks.	I.	English.	Industrials.	Composition.	Botany.	Geom. 5 weeks. Drawing.	Entomology.	Industrials.	U. S. Constitution.
	II.	Book-keeping.	Composition.	Botany.	Industrials.	Entomology.	Drawing 5 wks. Geometry.	Civil Engineering. Hygiene.	Industrials.
	III.	Industrials.	Botany.	Algebra.	Algebra.	Analytical Chemistry.	Analytical Chemistry.	English Literature.	Geology.
	IV.	Arithmetic.	Algebra.	Industrials.	Composition.			Chemical Physics.	Political Economy.
	V.	Drill or Industrials.				Military Science.	Dairying.	Drawing twice a week.	

Industrial Training.—Closely adjusted to the course of study is industrial training in several of the arts, to which each student is required to devote at least one hour a day. Among the lines of training each student may select, with the approval of the Faculty, except in terms when special industrials are required. Young men may have Farming, Gardening and Fruit-growing, Carpentry, Cabinet-making, Iron-work, Printing, or Telegraphy. Young women may take Sewing, Printing, Telegraphy, Floriculture, or Music.

All young men must have their industrials for one term in the carpenter shop before completing the first year; and during the spring term of the second year and the fall term of the third year, upon the farm, gardens, and orchards. Young women take their industrial for one term of the first year in sewing, and for the winter and spring terms of the second year in the kitchen laboratory and dairy.

The daily routine requires chapel at 8:30 A. M., and classes from 8:50 A. M. to 1 P. M., as shown under "Class Hours." Class rhetorical exercises are held weekly. Military drill is twice a week. On every Friday afternoon, at 1:30, all attend the public lecture or rhetorical exercises in chapel.

Special Courses.—Persons of suitable age or advancement who desire to pursue such branches of study as are most directly related to agriculture or other industries may select such studies under the advice of the Faculty. Assaying and Pharmaceutical Chemistry may be provided for by special arrangement when students are qualified to pursue them.

Post-Graduate Courses.—Arrangements can be made for advanced study in the several departments at any time. Special opportunities for investigation and research will be afforded at all times to resident graduates in Agriculture and Agricultural Chemistry, Physics and Chemistry, Horticulture and Botany, Zoölogy and Entomology, Mathematics, Engineering, and Drafting. Every facility for advancement in the several arts taught at the College will be given such students, though they are not required to pursue industrial training while in these courses.

Degrees.—The degree of Bachelor of Science is conferred upon students who complete the full course of four years and sustain all the examinations.

The degree of Master of Science is conferred in course upon graduates who comply with the following conditions:

1. Each candidate shall furnish evidence satisfactory to the Faculty of proficiency in at least one of each of the groups of arts and sciences here named:

ARTS.

Agriculture.
Horticulture.
Engineering.
Architecture and Designing.
Domestic Economy.

SCIENCES.

Botany.
Chemistry.
Zoölogy.
Entomology.
Physics.

2. Each candidate shall present for consideration by the Faculty a satisfactory thesis, involving original researches in line with one or the other of the courses pursued as above, and shall deposit a perfect copy in the College library.

3. Application to the Faculty for sanction of the lines of study and research selected should be made as early as the first day of November, and the subject of the thesis must be settled upon as soon as the first day of January preceding the Commencement at which the degree is expected.

4. Candidates must be from graduates of three or more years' standing, unless a post-graduate course of one year or more has been pursued at this College, in which case the second degree may be conferred two years after graduation.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and Professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of Master of Science may be conferred upon the graduates of other colleges of like grade and having similar objects with our own, on the following conditions:

1. The applicant for the Master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

2. His post-graduate study shall have been in line with that required of graduates of this College, as published in our Catalogue.

3. He must make application for the degree on or before the first day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1st an abstract of the thesis must be submitted to the Faculty.

5. Before May 15th the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

OUTLINE OF INSTRUCTION.

Agriculture.—*Second Year.*—History of agriculture, showing the successive steps by which the art has attained its present position. History and characteristics of breeds; their adaptation to the varying conditions of soil, climate, and situation; study of the forms of animals, as shown by the different breeds belonging to the College; the relation of stock-raising to general farming. Cultivation of hoed crops: management of corn and roots with reference to stock-feeding, and the growth of the finer grains. The growth of the "tame grasses" in Kansas: the best sorts for the State, and their management, as shown by experience upon the College farm and elsewhere. Implements of simple tillage: mechanical principles involved in their construction. Application of labor. Draught: different adjustments as affecting draught; use of the dynamometer. Plows for soil and subsoil. Drainage: soils that need draining; how to lay out a system of drains.

Fourth Year.— General principles governing the development of domestic animals: the laws of hereditary disease — of normal, abnormal, and acquired characters; atavism; correlation in the development of parts; in-and-in breeding and cross-breeding; influences affecting fecundity. The selection and arrangement of the farm with reference to the system to be pursued. Rotation of crops: general advantages of a rotation; the best rotation for the distribution of labor, production of manure, and extermination of weeds. Planning farm buildings — barns, piggeries, and stables. Manure: how best housed and applied; composting; commercial fertilizers. Agricultural experiments; field and feeding experiments. Stock-feeding and meat production: stall-feeding; soiling.

BOOKS OF REFERENCE.—Journal of the Royal Agricultural Society of England, Morton's Cyclopedia, Low's Practical Agriculture and Domesticated Animals, Ribot on Heredity, Farmer's Calendar, Allen's American Farm-Book, The Complete Grazier, Stephens's Book of the Farm, Thomas's Farm Implements, Waring's Draining for Profit and Health, the Reports of our own and other State Boards of Agriculture, and Shorthorn, Scotch Polled, Jersey, Berkshire, and Poland-China Herd-Books.

Horticulture.—It is the aim to teach this art from a botanical basis. The student applies his knowledge of the prime facts in botanical physiology to the various operations of the nursery, orchard, and farm. Instruction is given by a series of lectures upon the following topics, among others: The scope of horticulture. General principles of propagation — by buds, by seeds. Production of improved varieties — by careful selection of seeds, by interfertilization of known kinds. Perpetuation of valuable sorts of fruits by bud propagation — budding, grafting, layering, etc. The important points in nursery manipulation. The orchard: conditions of site, soil, exposure, elevation. Special treatment of different kinds of fruit trees. Pruning. Gathering and storing fruits. Small-fruit culture; list of varieties suitable for Kansas planting. Vegetable garden: selection and preservation of seeds; planting and transplanting. The management and use of hot-bed and cold-frame. Forest plantations. Wind-breaks. Hedges. Trees and shrubs for ornamental planting.

BOOKS OF REFERENCE.—The horticultural works of Downing, Warder, Fuller, Thomas, Loudon, Henderson, and other standard authorities; the Horticultural Reports of the States of Kansas, Michigan, Illinois, Iowa, Missouri, Massachusetts, and others. In Landscape Gardening, the works of Downing, Weidenmann, and Kemp.

Entomology.—This science is studied with special reference to its economic relations with agriculture and horticulture. A brief course in the principles of classification is followed by a more extended study of the life-history of beneficial and injurious insects, and means for encouragement of the one and for control of the other.

The instruction is presented in the form of lectures. Illustrations are furnished from the individual collections of the students, and from the entomological collection belonging to the College. Charts and drawings from nature are used to illustrate points of value in classification. The pocket lens used in botany is required in this study.

BOOKS OF REFERENCE.—Packard's Guide to the Study of Insects, Harris's Insects Injurious to Vegetation, Riley's Reports, LeBaron's Reports, Fitch's Reports, Thomas's Reports, Reports of the U. S. Entomologist, Transactions of the American Entomological Society, Canadian Entomologist, Psyche, and others.

Botany.—During the College course two terms are given to the study of Botany.

ELEMENTARY BOTANY.—In the spring term of the first year, the organs of plants are first studied, after which the minute anatomy is briefly considered. This is followed by a study of vegetable physiology. The classification of plants and vegetable products, and their uses, are other important topics of the course. During the latter part of the term a number of flowers are analyzed, and a few plants collected and prepared for the herbarium. Each student is required to provide himself with a pocket lens, under the direction of the professor in charge. Text-book, Kellerman's Elements of Botany and Analytical Flora of Kansas.

ADVANCED BOTANY.—In the winter term of the fourth year, the minute structure of plants, as well as vegetable physiology, is studied more fully. This includes an examination of the vegetable cell, its parts, modifications, and products, and of tissue as presented in its various forms. This is made the basis for more detailed work on special subjects, among which may be mentioned germination, development of tissues, protoplasm, starch, parasitic fungi — especially the moulds, smut, rusts, etc., and other cryptogamic plants. Each student has the use of a compound microscope, and works two hours daily in the botanical laboratory. While this course is intended primarily to furnish a foundation for applied botany in horticulture and agriculture, it also affords, to some extent, the advantages of systematic observation and original investigation. A good herbarium and a large greenhouse are drawn upon for material for study.

BOOKS OF REFERENCE.—The works of Sachs, Grey, Lesquereux, Sullivant, Englemann, Tuckerman, Cook, Berkeley, Darwin, Wolle, Bessey, Saccardo, and others.

Chemistry.—INORGANIC CHEMISTRY, which occupies the fall term of the second year, includes a consideration of chemical action with nomenclature and formulas, and a careful study of the history, manufacture, physical, chemical, and physiological properties, tests, and uses of the various elements and their compounds. While teaching the facts as such, it is the aim to give prominence to those which show relations and illustrate principles. Especial attention is given to those substances having extended application in the arts. In addition to the usual lecture-room experiments, the student repeats, as far as practicable, all this experimental work at his private work-table. Text-book, Remsen's Introduction to the Study of Chemistry.

ORGANIC CHEMISTRY comprises a six-weeks course of lectures upon the preparation and properties of those organic substances most useful to man.

In CHEMICAL ANALYSIS, each student has his stand in the Qualitative Laboratory, completely furnished with apparatus and chemicals for his own use. His work includes the analysis of more or less complex mixtures of chemicals, minerals, ores, soils, mineral waters, well-waters, etc. The time given to this work is two hours daily for eleven weeks.

AGRICULTURAL CHEMISTRY.—This includes a thorough consideration of the application of chemical principles to the economy of the farm: the origin and formation of soils; the classification and composition of soils; the analysis of soils and their adaptation to purposes of production; the composition and use of manures; composting; chemistry of farm operations—such as plowing, fallowing, draining; chemistry of plant-growth; the composition of grain and fodder plants, and their use and value as food; feeding; the chemistry of milk, butter, and cheese. Text-book, Elements of Agricultural Chemistry, by Johnston and Cameron.

BOOKS OF REFERENCE.—Roscoe, Schorlemmer, Miller, Storer, Cooke, Allen, Strecker, Bloxam, Remsen, Frankland, Fresenius, Thorpe, Blyth, Prescott, Wanklyn, Tucker, Naquet, Paul and Payen, Wagner's Technology, Crooke's Metallurgy, Richardson and Watt's Technology, Muspratt's Chemistry, Watts's Dictionary, Sutton's Volumetric Analysis, Crooke's Select Methods, Gmelin's Hand-Book of Chemistry, Journal of the Royal Agricultural Society, Reports of Experiment Stations.

Mineralogy.—For six weeks in the second-year, two hours a day are given to mineralogy. This includes the study of the properties, forms, and uses of the principal minerals of the United States. Blowpipe analysis forms an important part of the course, each student being required to identify and name a large series of minerals. The pocket lens required in botany classes is used in this study. Text-book, Dana's Manual of Mineralogy and Petrography.

BOOKS OF REFERENCE.—The works of Dana, Plattner, and Elderhorst.

Geology.—This includes a general consideration of the earth's features, the constitution of rocks, and the arrangement of rock-masses; the causes or origin of events in geological history; the order of succession in the strata of the earth's crust, and of the organisms that existed, and of the changes that were going on during the formation of each stratum. Prominence is given to facts having an economic bearing. The formation of soils and deposits of valuable minerals, especially in Kansas, are considered. LeConte's Compend of Geology is used as a text-book.

Books of Reference.—The works of Dana, LeConte, Geike, and the various geologic surveys.

Anatomy and Physiology.—Human anatomy is made the basis of a thorough study in physiology and hygiene. This includes such subjects as: Digestion and food; poisons and antidotes; circulation of the blood; respiration and ventilation; secretion and excretion; the nervous system; and the special senses. The course embraces, to some extent, Comparative Anatomy and Physiology, affording preparation for the study of Stock-breeding, Zoölogy, and Veterinary Science. Martin's Human Body is used as a text-book.

Books of Reference.—Dalton's Human Physiology, Yéo's Manual of Physiology, Flint's Physiology of Man, Gray's Anatomy, and Chauveau's Comparative Anatomy of the Domestic Animals.

Veterinary Science.—A short course of lectures in this study is given to the young men of the fourth-year class, the intention being to familiarize them with those parts of the subject that have direct bearing upon agriculture, as water supply for stock, ventilation of stables, diseases connected with food, individual hygiene, disinfection. eradication of contagious diseases, etc.

Books of Reference.—Fleming's Animal Plagues, Fleming's Manual of Sanitary Science and Police, Smith's Veterinary Hygiene, Williams's Principles and Practice of Veterinary Medicine, and Law's Farmer's Veterinary Adviser.

Special Hygiene.—To the ladies of the third year a course of daily lectures is given upon the laws of life and health. The course extends over a period of ten weeks, and covers questions pertaining to personal health, and the health of the household — such as food, air, exercise, clothing, temperature of rooms, and care of sick-room.

Books of Reference.—Health and its Condition (Hinton), Dictionary of Hygiene (Blyth and Tardien), Hygiene and Public Health (Buck).

Household Economy.—A series of lectures to the ladies of the second year continues through a term of twelve weeks. These cover the subjects of marketing, the chemistry of cooking, order, neatness, and beauty in housekeeping, and comfort of a family. The class spends one hour each day in the kitchen laboratory. and cooking is done by each student.

Books of Reference.—The writings of Dr. Pavy, Mrs. Lincoln. W. M. Williams, E. and F. N. Spon, H. Letheby, Miss Acton, Miss Parloa, and Miss Youmans.

Physics and Meteorology.—Two terms' work gives an opportunity for experimental study of the laws of sound, heat, light, electricity, and magnetism; the constitution of the atmosphere; the measurement of temperature and humidity; atmospheric pressure. Text-books, Atkinson's Ganot's Physics, and Loomis's Meteorology. This course also includes a careful study of instruments and methods employed in taking meteorological observations.

BOOKS OF REFERENCE.—The works of Deschanel, Tyndall, Faraday, Helmholtz, Grove, Gordon, Thompson, Stewart, Siemans, Maxwell, and Miller.

Arithmetic.—One term of the first year is given to a review of Arithmetic. Two objects are aimed at in this course: first, to impart a practical knowledge of the subjects and methods of computation used in ordinary business life; second, to secure the discipline of the reasoning powers so essential in the study of higher mathematics. Much attention is given to the oral solution of problems, and principles are taught rather than rules and formulas. Text-book, Brooks's Union Arithmetic.

Book-keeping and Commercial Law.—Beginning with a simple cash account, Book-keeping is developed through all the principles of single- and double-entry. Considerable time is given to those forms best adapted to farm and business life. Each student provides a full set of blanks. and keeps a regular set of books, in which accuracy of calculation and posting, and neatness of execution, are just as essential as correct understanding of the principles. Text-book, Bryant & Stratton's Common School Book-keeping.

In addition to this term's work in Book-keeping, a practical course in Commercial Law is given, including contracts, farm rights, negotiable paper, sales, real estate, partnership, bailment, common carriers, and business forms.

BOOKS OF REFERENCE.—Mayhew, Duff, and Bryant, Haigh's Manual of Farm Law, Townsend's Commercial Law.

Algebra.—Two terms are devoted to the study of Algebra. During the first of these the student is thoroughly drilled in algebraic notation, the fundamental processes, composition, factoring, fractions, and the simple forms of the equation. The second term is devoted to the various transformations and applications of equations — fractional, simultaneous, quadratic, radical, etc. A brief discussion of logarithms, proportion, and series follows. Text-book, Wentworth's Elements of Algebra.

Geometry.—In geometrical drawing of the first year, the student has already become familiar with geometrical forms, and the construction of figures representing them. Plane geometry is studied during the winter term of the second year. Half the spring term is then given to solid and spherical geometry. Throughout the course original demonstrations, and the solution of practical problems involving the theorems demonstrated, are required of the class. Text-book, Wentworth's Plane and Solid Geometry.

Trigonometry and Surveying.—All the essential principles of plane trigonometry are carefully developed and thoroughly mastered. A short treatment of spherical trigonometry follows. Surveying includes: theory, adjustment and use of instruments, platting, determination of areas, dividing land, U. S. Government surveys, triangulation, leveling, topographical surveying, and railroad surveying. Field practice with compass, transit, plane table, and Y level, is required. A topographical map, the data for which are gathered during the fall term, is drawn by each student during the winter term. Text-book, Wentworth's Trigonometry and Surveying.

Books of Reference.—Ray's Surveying, Johnson's Theory and Practice of Surveying, Gillespie's Land Surveying, and Higher Surveying, Reports of the Land Office.

Mechanics and Engineering.—A careful consideration of the laws of motion and force, as exhibited in machines and various phenomena of nature, occupies a single term. Another term is given to the study of proper materials for buildings, their construction and durability; forms of roofs and bridges; care and use of machinery, and roads and road-making. Drafting is an essential feature of the work. Peck's Mechanics is used as the text-book in the first term. Haswell's Engineer's Handbook is used in connection with lectures in Engineering.

Books of Reference.—Rankine's Mechanics, Nystrom's Mechanics, Badlitt's Mechanics, Hand-books of Engineering, Knight's Mechanical Dictionary.

Drawing.—This study is required in four terms, of which two are in the first, one in the second, and one in the third year.

First Term.—Daily lessons for fourteen weeks. Definition and mensuration of geometrical magnitudes, construction of perpendiculars, parallels, angles, and polygons, the circle and its secant lines, the ellipse, the ovoid, the oval, the parabola, the hyperbola, and various geometrical ornaments; use of drawing-board, T-square, and water-colors; conventional representation of building materials. Prof. Morse's first two books on Mechanical Drawing are used as text-books. The College furnishes drawing-board, T-square, triangle, and water-colors, but each student is required to have a drawing-pen and a pair of compasses with attachments.

Second Term.—Free-hand Drawing three hours a week for twelve weeks. After the study of Nos. 3 and 4 of White's Text-books of Art Education, drawing from the object is taken up. The models used are geometrical solids, and objects of utility and beauty whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations, and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow, and the reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish. Lectures on color, principles of design, and history of ornamentation are occasionally given.

Third Term.—Mechanical Drawing, five weeks. Orthographic and oblique projection of the straight line and the circle; intersection of geometrical solids; construction and development of helices. Principles of isometrical projection. Principles of shades and shadows. Books 3 and 4 of Morse's Mechanical Drawing are used as text-books.

Fourth Term.—Mechanical Drawing twice a week for ten weeks. Principles of parallel, angular, and oblique perspective; the perspectives of vertical and horizontal cylinders, cylindric perspective, and perspective corrections; intersections of curved and plain surfaces in perspective; shadows in perspective; shaded perspectives. Books 5 and 6 of Morse's Mechanical Drawing are used as text-books.

During the winter term of the third year, each student is required to draw, color, ink, and letter a map delineating the surveys made during the fall term.

Students who show special aptitude are encouraged to take drawing as a fourth study during any part of the course, and given every opportunity to fit themselves for the drafting office or for special art schools. The instruction includes an extended course in free-hand drawing, shading, coloring, architectural and mechanical drawing, supplemented by a course of reading on art topics.

The graphic work of the different classes and special students is retained by the department for exhibition during Commencment, after which it is returned.

BOOKS OF REFERENCE.—Warren's Descriptive Geometry, Walter Smith's Manuals of Art Education, Ware's Perspective, Andre's Hand-Book of Topographical Drawing, Davies's Shades and Shadows, Gwilt's Cyclopedia of Architecture, Prang's Art Atlas, Lübke's History of Art, Steinhauser's Room Decoration, Van Bezoldt's Theory of Color, Winkelman's History of Ancient Art, and several volumes of the writings of Viollet Le Duc.

English Language and Literature.—*First Year.*—The study of English Grammar is made to serve directly in securing clear perception and correct expression. Such practice in analysis and parsing as may give the student a clear idea of the English sentence in all its parts is associated with frequent exercises in expression and criticism. Under English Structure is included a careful study of words and their elements—roots, stems, prefixes, and suffixes. The most fruitful roots from the Saxon, Latin, and Greek are learned, and also the laws governing the changes in the letters of roots in forming derivatives. Lectures are given upon the origin and history of the English Language. At the same time, the daily exercises are made a means of training in spelling, pronounciation, and definition. Text-books, Reed & Kellogg's Higher Lessons in English, Swinton's Word Analysis.

Principles and methods in English Composition are then taken up, with Kellogg's Rhetoric as a text-book. Numerous exercises and revisions familiarize the student with the essentials of neat, legible manuscript, and clear, forcible expression.

Third Year.—One term is given to the study of Higher Rhetoric, embracing the principles of clear explanation and convincing argument, as well as the outlines of sound criticism, as presented in A. S. Hill's Rhetoric. This is followed by a term spent in the history of the English language and literature, with abundant illustrations from the best authors.

Students are led in this way to appreciate the power of our mother tongue, and at the same time to gain some acquaintance with the best thoughts of the world. Students are encouraged and directed in the use of the College Library, and are under constant oversight in the expression of their thoughts in writing. Original declamations, carefully prepared, and delivered before the students and Faculty, make a part of the drill in the higher classes.

In the course for young women, the first term of the fourth year gives training in the elements of criticism and good taste by a critical study of famous works in English and American literature.

BOOKS OF REFERENCE.—Goold Brown's Grammar of English Grammars. Marsh's Lectures on the English Language, Whitney's Life and Growth of Language, DeVere's studies in English, Allibones's Dictionary of Authors, Hallam's Literature of Europe, W. D. Adams's Dictionary of English Literature, Whately's Rhetoric, Fowler's English Grammar, Trench on the Study of Words, Chambers's Cyclopedia of English Literature, Phillips's English Literature, Tyler's American Literature, Welsh's Development of English Literature and Language, and Alden's Cyclopedia of Universal Literature.

History and Constitutional Law.—In the first year, the study of United States History occupies one term, with Johnston's History as a text-book. The class is in several divisions, so that each student may receive more individual attention, and in order that at least one division may be formed for more advanced historical instruction. Special attention is given to the form and growth of the Government, and as far as possible past events are used to throw light on present problems. During the second year, as a part of the work in Rhetoricals, a number of historical essays are required.

In the third year a term is given to General History. The text-book, Swinton's Outlines, is supplemented by lectures on the progress of civilization and the philosophy of history. Topics covering important events are assigned, the intention being to cultivate a taste for historical investigation.

In the fourth year, a careful study of the Constitution of the United States is made, with Cooley's Principles of Constitutional Law as a textbook. In addition, lectures are given on the leading features of the

Constitution and Laws of Kansas, and a number of important questions in Political Science are discussed. The object kept steadily in view throughout this course, as well as those in history, is to furnish a thorough training for citizenship.

BOOKS OF REFERENCE.—Bancroft's United States, Justin Winsor's Narrative and Critical History of the United States, McMasters's People of the United States, Lenormant and Chevalier's Ancient History, Rawlinson's Ancient History, Mommsen's Rome, Grote's Greece, Bryce's Holy Roman Empire, Guizot's France, Green's England, Buckle's Civilization, Draper's Intellectual Development, Guizot's Civilization, Cooley's Constitutional Limitations, The Federalist, Woolsey's Political Science, and other works.

Political Economy.—The study of Political Economy, in a full term of the fourth year, gives a fair presentation of subjects connected with production, distribution, and consumption of wealth. While the instruction is given by lectures, each student is expected to provide himself with some standard text-book for daily reference. Pains is taken to compare conflicting views, and point out sources of information on all sides of vexed questions, without bias or prejudice. Each student is required to present at some time during the term an original paper upon some topic assigned by the instructor.

BOOKS OF REFERENCE.—The works of Adam Smith, Mill, Fawcett, Cairnes, Walker, Bowen, Carey, Thompson, Roscher, and many others.

Logic and Philosophy.—The art of reasoning correctly is aided by a study of systematic logic, both deductive and inductive. Special prominence is given to methods for exact observation and experiment, and correct principles for classification. The previous researches and experience of the student are made to illustrate these principles. Text-book, Jevon's Lessons in Logic.

A short course in Psychology gives the general principles of intellectual and moral philosophy. Perception, understanding, reason, feeling, and volition, are topics of explanation and analysis. Theories of right and wrong, and correct principles of action, are made the means of a clear understanding of individual rights and duties. Hopkins's Outline Study of Man forms the basis of the course.

BOOKS OF REFERENCE.—Mill's, Jevons's and Fowler's Logic, Bascom's Psychology, Porter's Human Intellect, Fairchild's Moral Philosophy, Cousin's "The True, the Beautiful, and the Good," and the works of Spencer. Hamilton, and others.

Industrial Arts.—The training in these departments is designed to be systematic and complete in each, so that the student, following a single line diligently through the four-years course, gains the essentials of a trade and a reasonable degree of skill. Those who wish only a general acquaintance with the arts can take shorter courses in several of them; but all are to select with a definite purpose. In the established course, young men are required to take the regular term in the carpenter shop, and on the farm and gardens, whatever the industrial chosen; young women are required to give one term to sewing, one to practice in the kitchen laboratory, and one in the dairy.

Agriculture and Horticulture are required of young men as industrials during one term of the second year and one term of the third year. In these, practice is made to illustrate and emphasize the teaching, and cover essentially the same ground.

Cooking.—During the winter term, the young ladies who have lectures on Household Economy are required to cook one hour each day. They are taught various methods of making the substantial articles of food, as well as allowed to spend some time on the dainty dishes. During the term, they have practice in waiting on the table, in serving guests, and in arranging for evening companies, thus putting into immediate practice the lectures of each day.

During the fall term, any students who have passed the study of Household Economy may take cooking as an industrial, in which canning fruits, making preserves, jellies, pickles, mince-meat, desserts, cake and fancy breads form the principal part of the work.

Dairying.—During the spring term, daily instruction and practice in the different branches of dairying are given the ladies of the second year by the Instructor in Household Economy. Here the regular daily work is supplemented by a short course of lectures intended to explain the best practice in the arts of butter- and cheese-making, and to give the reasons therefor. The following topics cover, in the main, the instruction given the class: Influences affecting the quality and quantity of milk; butter-making; creameries; "deep" and "shallow" setting systems; packing and preserving butter; the household and factory systems of cheese-making.

Carpentry.—Wood-work is required of all young men during one term of the first year. In the first term's work a definite graded series of tasks is given in joining, work to dimensions, and simple problems in construction and turning, with the proper use and care of common bench tools, through which each student is advanced according to ability. Practice is given later in general wood-work, carpentry, cabinet-making, and pattern-making; and the advanced students may have work suited to their chosen line, with special problems of construction, and special training in the use and care of fine tools, including saw-filing. All work during industrial hours is laid out by the Superintendent, and belongs to the shop, except that fourth-year students are allowed to work from drawings of their own upon articles for their own use or profit. All students may be allowed the use of the shop outside of the practice hours for work of their own, under direction of the Superintendent.

In iron-work, instruction is given in ordinary work—forging, filing, tempering, etc.

Sewing.—One term of sewing is required before the completion of the first year of study. During this term the work is carefully laid out by the Superintendent in a series of lessons, graded to the capabilities of each student. To more advanced students all ordinary forms of sewing with needle and machine are taught, and any student may furnish material, and work for her own advantage under direction of the Superintendent. Cutting and fitting by a straight-line system are taught, and the systems are furnished at wholesale rates. Fancy needle-work and knitting may be taken at certain stages of the course.

Printing.—Two courses are pursued in this art. In one the student is taught the use of the implements or tools used in typography; composition and imposition; correcting proof; technical terms; presses and their workings; and the general duties of a first-class workman. The other course of lessons embraces instruction in spelling, capitalization, syllabication, punctuation, proof-reading, and such other work as will make the student accurate and expert. Wilson's Punctuation is the text-book; but much of the instruction is oral—such as grows out of the every-day experience of the office.

Admirable drill is furnished by the *Industrialist* to all, but especially to those who take the full course. The printing which the departments of the College require gives to the advanced student a fair knowledge of the principles and practice of job work.

Books of Reference.—MacKellar's American Printer, Harpel's Typograph, Ringwalt's Encyclopedia of Printing, DeVinne's The Invention of Printing, DeVinne's Printers' Price List, the *Inland Printer*, *American Art Printer*, *Superior Printer*, *Paper and Press*, and standard works on grammar and rhetoric.

Telegraphy.— The course of training involves for beginners the characters that compose the alphabet, and combinations of these characters into words and sentences,— attention being paid to spelling and to short and precise expression in messages,— abbreviations, signals, forms of messages, train orders, reports, etc. To the more advanced is given regular line business,— as press reports, messages, cipher messages, and orders in all forms used by prominent telegraph companies, together with the necessary book-keeping, upon exact copies of blanks in actual use, thus giving the student an understanding of the work of an operator. A portion of the time is devoted to instruction in the use and management of lines, batteries, instruments, etc. The elementary principles of electricity, magnetism, and electro-magnetism involved in telegraphy are taught and illustrated by experiments. The more recent inventions relating to the art are discussed and explained.

Books of Reference.—Prescott's Electric Telegraph, Pope's Hand-Book of the Telegraph, Culley's Practical Telegraphy, Prescott's Speaking Telephone and Other Electrical Inventions, and the works of Du Moncel, Clark & Sabine, Davis & Rae, Niaudet, Jenkins, Harris, Abernethy, Lockwood, Preece & Sivewright, Douglas, Swift, and Haskins, with the *Electrical Review.*

INSTRUMENTAL MUSIC.—Provision is made for the teaching of music upon instruments of all sorts. A full course upon the organ or piano extends over four years, including harmony and composition; but the students may take lessons for a single term if they choose. The College furnishes the instruments for daily practice, but the instruction is paid for at the usual rate, as given under "Expenses." Music may be the industrial for young women, unless some other is required in the course. Young men may take music in addition to their course, if able to keep up standing in classes.

Opportunity is given for students who are sufficiently advanced to join in the weekly rehearsals of the College Orchestra.

Text-Books.—Plaidy's Technical Studies, Czerny, Duvernoy, Loeschorn; Recreations for Piano and Organ; selections from Haydn, Mozart, Beethoven, and others; Arban's School for Cornet, Cuisinus, White, Wichtl's Violinist, De Beriot, and the recognized school for any instrument not included in the above; Marx's Harmony and Composition, Elementary Charts, Berloiz's Instrumentation.

Vocal Music.—All students are furnished instruction in vocal music free of charge, under the direction of the Faculty. Classes meet on Mondays and Wednesdays for advanced pupils, and for beginners on Tuesdays and Thursdays, at 1:30 P. M. The advanced class shares in the music of public exercises during the Commencement week. This study is taken up at the choice of the student, but regular attendance is required as at other classes until excuse is granted.

Arrangements for special voice culture may be made with the Professor in charge, on reasonable terms.

Text-Books.—Scansion and Song, Browns' Prismatic Charts, Hatton, Concone, Marchesi, with selections from the opera and oratorio.

Military Training.—During the second year, a course of thirty-two lectures is given. These are designed to show how an army is organized, equipped, and supplied, to explain some of the minor operations of war, to show the organization of the militia, and the militia law of this State. Instruction is afforded, to such as desire it, in other military subjects.

To those who desire it, an opportunity is given for practice in the ordinary infantry drills, including the school of the soldier, company, and battalion, and target practice. Although drill is thus made optional, students are not allowed to take it for periods shorter than one term. To obtain a proper proficiency, however, one should take the semi-weekly drill for at least a year.

The College battalion is divided into companies, which are officered by students appointed each term by the Professor in charge, with the approval of the President.

Arms and accoutrements are furnished by the United States Government, the students being required to keep such as they use in proper condition. Uniforms for use in drill are furnished by the College.

EXAMINATIONS.

Examinations for admission are held at the beginning of each term, as laid down in the calendar of the College year. Applicants, to enter at any time during the term, shall have special examinations. These examinations are chiefly written, and a standing of 70 per cent. is required to pass any study.

Examinations in the course are held as arranged by the Faculty. The results of these examinations are marked on a scale of 100, and combined with the average of the preceding daily exercise upon the same scale into a grade for report to the Secretary. But any student not present at three-fourths, at least, of the class exercises receives, at such time as the teacher may name, a more extensive examination than the general one; and this examination alone decides the grade.

Averages of grades in the register are made by giving the final term grade a value of two-thirds and previous grades a value of one-third. After each term examination during the first year of attendance, a report of advancement is made to parents; and any student, upon leaving College at the close of a term, may receive a certificate of standing.

The final grade and the term average must be at least 70 for passing any study; and any student who fails to pass in two studies of the course may drop back a year or withdraw from College.

After completing the studies of the first year, students are allowed special examination only upon recommendation of the Professor in charge, and by permission of the Faculty. Permission for examination in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the Professor in charge, and are thorough and exhaustive.

MEANS OF ILLUSTRATION.

AGRICULTURE.—Two farms of 215 and 100 acres, for the most part surrounded by durable stone walls, subdivided into fields of variable size to suit the system of management.

A large variety of standard grains and forage crops in cultivation in fields and experimental plats.

A barn 50 by 75 feet, expressly arranged for experimental uses; and connected with it a general-purpose barn, 48 by 96 feet, for grain, hay, horses, and cattle. Both buildings are of stone, and are provided with steam power and equipped with improved machinery for shelling, grinding, threshing, cutting for the silo, and steaming.

Two piggeries, one of ten pens for experimental uses, and one of six pens, with separate yards, for general purposes.

An implement house 22 by 50 feet, of two stories, and corn-cribs.

Shorthorn, Aberdeen-Angus, Hereford, and Jersey cattle; Berkshire and Poland-China swine.

Farm implements of improved patterns.

Collections of grains, grasses, and forage plants.

Buildings, stock and equipments are valued at $25,000.

HORTICULTURE AND ENTOMOLOGY.—Orchards containing 275 varieties of apples, 80 of peaches, 50 of pears, 16 of plums, 20 of cherries, and 10 of apricots.

Small-fruit garden, with 200 varieties of small fruit, including blackberries, raspberries, gooseberries, currants, and strawberries; and vineyard, with 75 varieties of grapes.

Forest plantation of twelve acres, containing twenty varieties of from ten to fifteen years' growth.

Ornamental grounds, set with a variety of evergreens and deciduous trees. Sample rows, containing about 150 varieties of ornamental and useful shrubs and trees, labeled.

Vegetable garden, with hot-beds and cold-frames and experimental beds. Practice rows for students' budding, grafting, cultivating, and pruning.

Two well-planned and furnished green-houses of three rooms each, stocked with a collection of native and exotic plants.

Museum, containing a collection of woods from American forests, and a large series of specimens in economic and general entomology.

Value of property, exclusive of orchards and grounds, $11,500.

CHEMISTRY AND MINERALOGY.—Eight rooms, fitted with tables and apparatus for a class of eighty students in qualitative analysis, sixteen in quantitative analysis, including necessary facilities for assaying, with a mineralogical collection and general illustrative apparatus. Value, exclusive of building, $7,500.

BOTANY.—A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the State; also twenty-one compound microscopes, three dissecting microscopes, tools, reagents, wall-charts, etc. Valued at $2,500.

GEOLOGY, ZOÖLOGY, AND VETERINARY SCIENCE.—A general museum well fitted with cases containing valuable collections of mounted Kansas mammals and birds, with mounted skeletons of wild and domestic animals. The largest collection of Kansas fishes and molluscs in the State. Kansas reptiles and batrachians, salt-water fishes and invertebrates in alcohol. Collections of Mound-builders' and Indian relics. Kansas fossils and rocks, typical of the geological ages found in the State.

In Veterinary Science: A laboratory fitted with apparatus and reagents, for the study of disease. A collection of charts, models, and anatomical preparations, illustrating healthy and diseased structure. Value, $4,500.

DRAWING.—Models, plaster-casts, patterns, charts, easels, and implements. Valued at $1,400.

PHYSICS.—Physical apparatus, meteorological instruments, etc. Edelman's dynamo electric machine, with numerous accessories, sling psychrometer, and anemometer. The value of the whole is $2,600.

MATHEMATICS AND SURVEYING.—Transits, compasses, levels, chains, models, etc. Valued at $1,000.

MECHANICS AND ENGINEERING.—Carpenter shop, with separate benches and tools for forty-five students in each class, besides lathes, mortising machine, circular saws, band saws, planer, friezer, boring machine, grinder, and general chest of tools for fine work. Power furnished by a ten-horse-power Atlas engine.

Shops for iron work, with forges, vises, drills, etc. Testing machine, charts, and models.

Inventory of material and apparatus in both shops, $5,800.

KITCHEN LABORATORY, with ranges, cooking utensils, dining-room furnishings, dairy furniture; valued at $600.

PRINTING.—Office, with thirty pairs of cases, large fonts of six-point, eight-point, ten-point, and eleven-point Roman type; a good assortment of job type and brass rule; a Babcock cylinder press with steam power, a Gordon job press; a mitering machine, a rule curving machine, and a paper cutter. Value of equipment, $3,500.

TELEGRAPHY.—Office with five miles of line, connecting twenty branch offices, and as many instruments. Inventory, $1,000.

SEWING ROOMS, with six machines, models, patterns, and cases; worth, $550.

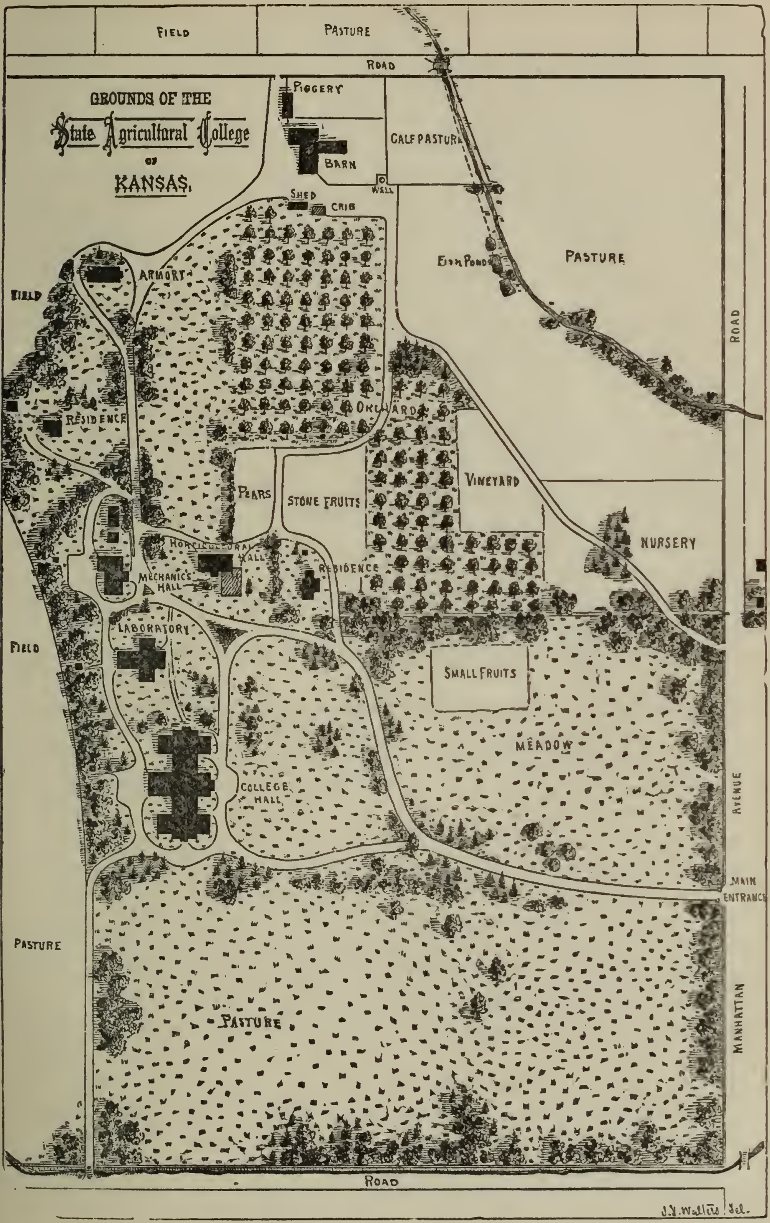
MUSIC ROOMS, with four pianos, four organs, and other instruments; valued at $1,500.

A LIBRARY, carefully selected and catalogued, containing over 9,000 bound volumes, and 2,500 pamphlets. A reading-room is maintained in connection with the library, where may be found on file forty-five of the leading literary, scientific, technical, and agricultural periodicals, and several hundred newspapers, including the principal daily and county papers from all parts of the State. Value of library, $15,000.

ARMORY, containing one hundred and fifty stands of arms (breech-loading cadet rifles, caliber .45), with accoutrements; two three-inch rifled guns; also swords, uniforms, etc. Value, exclusive of arms, $800.

GROUNDS AND BUILDINGS.

The College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing towards the city, are beautiful in location. The grounds include an irregular plot in the midst of a fine farm, with orchard, vineyard, and sample gardens attached. The grounds are tastefully laid out and extensively planted according to the design of a professional landscape gardener, while well-graveled drives and good walks lead to the various buildings. All of these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and all are heated by


GROUNDS OF THE
State Agricultural College
OF
KANSAS.
FIELD
PASTURE
ROAD
PIGGERY
BARN
CALF PASTURE
WELL
SHED
CRIB
ARMORY
FIELD
FISH PONDS
PASTURE
RESIDENCE
ORCHARD
PEARS
STONE FRUITS
VINEYARD
NURSERY
HORTICULTURAL HALL
RESIDENCE
MECHANICS' HALL
LABORATORY
FIELD
SMALL FRUITS
MEADOW
COLLEGE HALL
ROAD
AVENUE
MAIN ENTRANCE
PASTURE
PASTURE
MANHATTAN
ROAD
J. D. Walters del.

steam or hot water. The buildings stand as indicated in the plot accompanying the following description:

College, 152 by 250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices, reception room, cloak-rooms, studies, chapel, library, reading-room, kitchen laboratory and dairy, sewing-room, society-rooms, telegraph office, and twelve class-rooms.

Chemical Laboratory, one story, 26 by 99 and 46 by 75 of floor space, in form of a cross. It contains eight rooms, occupied by the Department of Chemistry and Mineralogy.

Mechanics' Hall, 39 by 103 feet, of two stories, occupied by Carpenter Shop, Printing Office, and Music Rooms.

Horticultural Hall, 32 by 80 feet, one story and cellar, having cabinet-room, class-room, and storage, with green-house attached.

Horticultural and Entomological Laboratory, with propagating houses attached.

Two stone dwellings, occupied by the President and the Professor of Agriculture.

Museum Building, 46 by 96 feet, and two stories. This building, which has served many purposes, is now fitted for an armory, drill-room, and Veterinary laboratory below, and for class-room and laboratory for Department of Botany and Museum of Natural History above.

The Farm Barn is a double but connected stone structure, 50 by 75 feet, with an annex 48 by 96 feet. A basement, having stables for seventy-five head of cattle, silos, engine-room, and granaries, underlies the entire structure.

The Horticultural Barn is a stone building, containing store-room, granary, and stables for several horses.

The blacksmith shop, lumber house, implement house, piggery, and various out-buildings are of wood.

TERMS OF ADMISSION.

Applicants for admission at the beginning of the College year must be at least fourteen years of age, and able to pass a satisfactory examination in reading, spelling, writing, arithmetic, including percentage and interest, geography, and elements of English grammar. Those applying later in the year must show sufficient advancement to enter the classes already in progress. Every effort should be made to begin with the first day of a term, in order to advance with classes from the first.

Applicants of mature age who, for lack of advantages, are unable to pass the full examination, may be received on special conditions.

Applicants for advanced standing in the course must pass examination in all the previous studies of the class to be entered; but, if they have pursued such studies in other institutions of similar rank, they may receive credit for their standing in those institutions upon presenting a certificate from the proper officer, showing that their course has been equivalent to that given here.

The following questions may serve as samples of the examinations for admission:

GRAMMAR.

1. Define etymology, parts of speech, analysis.
2. How are sentences classified? Write a sentence of each class.
3. What is declension? Decline the personal pronoun, third person.
4. Conjugate the verb *work* in the indicative mode, future tense.
5. Give comparison of sweet, wonderful, swiftly, square, correctly.
6. Correct, if necessary, and give reasons:

   Everybody have a smile on their face.
   I have never saw such a horrid day.
   Between you and I, them people are not honest.

7. Parse each word:

   The river runs swiftly to the sea.

8. Analyze this sentence:

   The man who believes that all men are brothers should be philanthropic.

9 and 10. Write a composition of fifty words on the subject, *Mountains.*

ARITHMETIC.

1. Find the sum of nine hundred and nine, eight thousand seven hundred and seventy, sixteen thousand four hundred and seventy-eight, and nine hundred and sixty-five.

2. If eighty-eight horses cost $9,416, what is the average cost? How much more would 12 more horses cost at $10 more for each horse?

3. Explain the difference between a decimal and a common fraction.

4. Find the lowest common multiple of 84, 108, and 144.

5. Find the value of $(3\frac{2}{3}+5\frac{3}{4})-(2\frac{1}{2}+3\frac{5}{8})$.

6. If 17 bushels of wheat cost $13, what will $14\frac{2}{3}$ bushels cost at the same rate?

7. If 9,460 ℔s. of coal were sold at $8 a ton, what will be the cost to the purchaser?

8. A room measures 18 by 20 ft., and is $10\frac{1}{3}$ ft. high. How much will it cost to plaster the walls and ceiling at 30 cents a yard?

9. What per cent. of 960 is 350?

10. Find the interest on $800 for 4 years, 6 months, and 23 days at 10 per cent.

GEOGRAPHY.

1. Draw a map of Kansas, locating its State institutions and mineral districts.

2. Locate the following cities: Albany, Rochester, Cleveland, St. Paul, Nashville, Galveston, and Savannah.

3. Bound Texas, Georgia, Vermont, and Colorado.

4. What is a mountain system? Name the mountain systems of North and South America.
5. Name the five great powers of Europe, and their capitals.
6. What is climate? Upon what does it depend?
7. Locate the following: Japan, India, Madagascar, Sicily.
8. Give the most prominent uses of rivers and mountains.
9. What causes day and night? The seasons?
10. Give a short description of Africa, naming its principal mountains, rivers, States, and cities.

GENERAL DUTIES AND PRIVILEGES.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character, by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week-day except Saturdays, and no student may be absent without excuse. Students enrolled in any term cannot honorably leave the College before the close of the term, unless excused beforehand by the Faculty. A full and permanent record of attendance, scholarship, and deportment shows to each student his standing in the College.

Chapel exercises occupy fifteen minutes before the meeting of classes each morning, and unnecessary absence from them is noted in the grades.

Every Friday, at 1:30 P. M., the whole body of students gather for a lecture from some member of the Faculty, or for the rhetorical exercises of the third- and fourth-year classes. Once a week all the classes meet, in their class-rooms, for exercise in elocution and correct expression.

There are four prosperous literary societies, two of them of many years' standing. All meet weekly, in rooms set apart for their use. The *Alpha Beta*, open to both sexes, and the *Ionian*, for ladies, meet Friday afternoon. The *Webster* and the *Hamilton* admit to membership gentlemen only, and meet on Saturday evening.

The Scientific Club, composed of members of the Faculty and students, meets in the Chemical Laboratory on the last Friday evening of each month.

Every Friday evening a students' prayer-meeting is held in a College society room, led by a member of the Faculty. On the Sabbath, students are expected to attend service at least once in the different churches of the city.

Branches of the College Y.M.C.A. and Y.W.C.A. hold weekly meetings at the College.

Once in each term the College Hall is opened for a social gathering of Faculty and students, in which music, literary exercises, and friendly greeting find place.

Public lectures by prominent men of the State are provided from time to time, as opportunity offers. All are free.

LABOR AND EARNINGS.

Every encouragement is given to habits of daily manual labor during the College course. Only one hour of daily practice in the industrial departments is required; but students are encouraged to make use of other opportunities for adding to their ability and means.

All labor at the College is under the direction of the Superintendents of the departments, and offers opportunity for increasing skill and efficiency. In regular weekly statements, the students are required to observe business forms and principles, showing from their daily account when and where the work was performed.

The shops and offices are opened afternoons and Saturdays for the accommodation of skilled students in work for their own advantage. Everywhere the student who works wins respect; and it is a matter of pride to earn one's way as far as possible.

The labor of the students in the industrial departments is principally a part of their education, and is not paid for unless the student is employed — outside of required hours of labor — upon work for the profit of the College. Students are so employed upon the farm, in the gardens or the shops, and about the buildings. The labor is paid for at rates varying with services rendered, from eight to ten cents an hour. The Superintendents strive to adjust their work to the necessities of students, and give them the preference in all tasks suitable for their employment. So far as practicable, the work of the shops and offices is turned to account for their benefit; and the increasing extent of the grounds and sample gardens brings more of such labor. The monthly pay-roll for the past year ranges from $250 to $400.

Many students obtain work in the city or upon neighboring farms, and so pay part of their expenses. In these ways a few students are able to earn their way through College. The amount so earned will vary according to the tact and zeal of the student. The majority must expect to provide by earnings outside of term-time, or from other sources, for the larger part of their expenses. The long summer vacation of three months offers opportunity for farm or other remunerative labor; and no one need despair of gaining an education if he has the ability to use his chances well.

EXPENSES.

Tuition is free, and no general fee for incidental or contingent expenses is charged. In a few special departments of instruction, the following payments are made in advance to the Secretary:

In the term of Analytical Chemistry, students pay $3 for the chemicals and apparatus used in their laboratory practice and analysis.

In the Printing Office, young men, in their first year, pay $3 a term for office expenses. Advanced students have the use of the office for the work performed during the industrial hours.

In Telegraphy, young men pay $3 a term for office expenses.

Young women are furnished both Printing and Telegraphy free of expense, these two offices, with the Sewing and Cooking Departments, being provided especially for their industrial training.

Lessons in instrumental music — two a week — are from $10 to $14 a term, according to its length; one a week, $6 to $8.40. One-half is to be paid to the instructor in charge with the first lesson, the other half at the middle of the term.

The cost of text-books at the book-stores is, for the first year, about $4 a term; for the second year, $2.75 a term; for the third year, $7 a term; and for the fourth year, $5.50 a term.

The expenses for apparatus and tools to each student during the course are as follows: Drawing $3.50; microscope for Botany and Entomology $1.50; case, pins, etc., for Entomology $2.25; rules, in carpentry 25 cents, printing 25 cents. The total expense for these articles during the four years is less than ten dollars.

Board and washing are not furnished by the College. Board, with furnished rooms, can be procured in private families at from $2.75 to $4 per week. Some students board themselves at even less cost; and rooms for the purpose can be obtained at a rent of from $1 to $3.50 a month. Washing costs from 50c. to $1 a dozen pieces.

Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 a year.

BUSINESS DIRECTIONS.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid at the office of the Treasurer in Manhattan.

All payments of principal and interest on account of bonds or land contracts must be made to the State Treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. Geo. T. Fairchild, Managing Editor. Subscriptions are received by Supt. J. S. C. Thompson.

Donations for the Library or Museums should be sent to the Librarian, or to Prof. Kellerman, Chairman of Committee on Museums.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several Professors and Superintendents.

General information concerning the College and its work,—studies, examinations, grades, boarding-places, etc.,—may be obtained at the office of the President, or by addressing the Secretary.

Applications for Farmers' Institutes should be addressed, as early in the season as possible, to the President.

The Experiment Station should be addressed through the Director.

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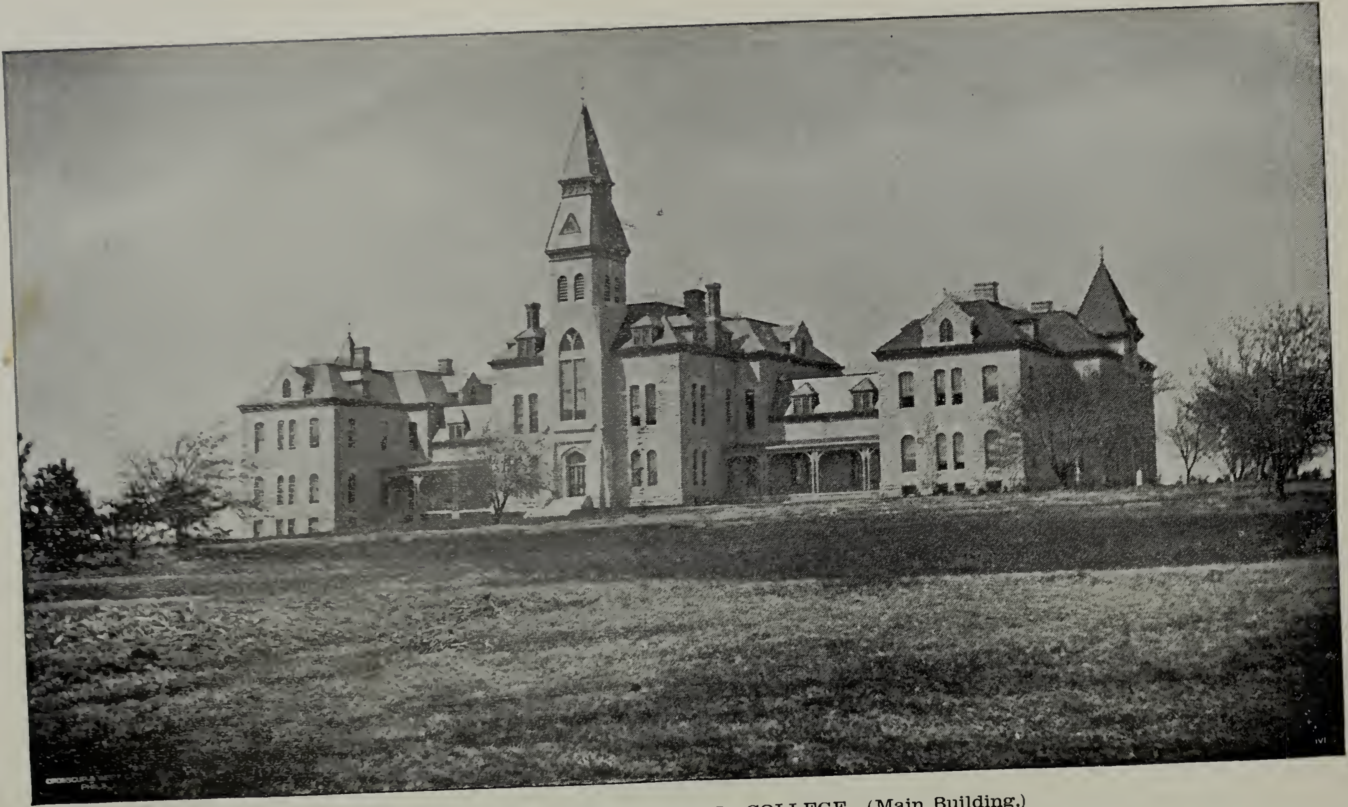

KANSAS STATE AGRICULTURAL COLLEGE. (Main Building.)

KANSAS STATE AGRICULTURAL COLLEGE. (General View.)

TWENTY-EIGHTH ANNUAL CATALOGUE

OF THE

OFFICERS, STUDENTS AND GRADUATES

OF THE

STATE AGRICULTURAL COLLEGE

OF KANSAS.

1890-91.

MANHATTAN, KANSAS.

TOPEKA.
KANSAS PUBLISHING HOUSE: CLIFFORD C. BAKER, STATE PRINTER.
1891.

Terms and Vacations.

FALL TERM, 1891.

Wednesday, September 9.—Examination for admission, at 9 a. m.

Thursday, September 10.—College year begins.

Friday, October 23.—Examination.

Friday, December 4.—Annual Exhibition of the Alpha Beta Society.

Thursday and Friday, December 17 and 18.—Examination at close of Fall Term.

December 19 to January 4.—Winter Vacation.

WINTER TERM, 1892.

Monday, January 4.—Examination for admission, at 9 a. m.

Tuesday, January 5.—Winter Term begins.

Saturday, January 30.—Annual Exhibition of the Hamilton Society.

Friday, February 5.—Examination.

Friday, March 11.—Annual Exhibition of the Webster Society.

Thursday and Friday, March 24 and 25.—Examination at close of Winter Term.

SPRING TERM, 1892.

Monday, March 28.—Spring Term begins.

Friday, April 22.—Annual Exhibition of the Ionian Society.

Friday, April 29.—Examination.

Monday and Tuesday, June 6 and 7.—Examination at close of year.

June 5 to 8.—Exercises of Commencement Week.

Wednesday, June 8, 10 a. m.—Commencement.

June 9 to September 7.—Summer Vacation.

FALL TERM, 1892.

Wednesday, September 7.—Examination for Admission, at 9 a. m.

Thursday, September 8.—College year begins.

Board of Regents.

Hon. MORGAN CARAWAY, (1892,)* *President*,
Great Bend, Barton Co.

Hon. R. W. FINLEY, (1893,) *Vice President*,
Goodland, Sherman Co.

Hon. JNO. E. HESSIN, (1892,) *Treasurer*,
Manhattan, Riley Co.

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Holton, Jackson Co.

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Hon. JOSHUA WHEELER, (1894,) Nortonville, Jefferson Co.

Pres. GEO. T. FAIRCHILD, (*ex officio*,) *Secretary*,
Manhattan.

I. D. GRAHAM, *Assistant Secretary*, Manhattan.

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* Term expires.

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Board of Instruction.

FACULTY.

GEORGE T. FAIRCHILD, A.M., PRESIDENT,
Professor of Logic and Political Economy.

GEORGE H. FAILYER, M.Sc.,
Professor of Chemistry and Mineralogy.

EDWIN A. POPENOE, A.M.,
Professor of Horticulture and Entomology, Superintendent of Orchards and Gardens.

WILLLIAM A. KELLERMAN, PH.D.,
Professor of Botany.

DAVID ERNEST LANTZ, M.Sc.,
Professor of Mathematics, Librarian.

JOHN D. WALTERS, M.Sc.,
Professor of Industrial Art and Designing.

IRA D. GRAHAM, B.Sc.,
Secretary, Instructor in Book-Keeping.

OSCAR EUGENE OLIN,
Professor of English Language and Literature.

MRS. NELLIE SAWYER KEDZIE, M.Sc.,
Professor of Household Economy and Hygiene.

MRS. ELIDA E. WINCHIP,
Superintendent of Sewing.

OZNI P. HOOD, B.Sc.,
Professor of Mechanics and Engineering, Superintendent of Workshops.

ALEXANDER B. BROWN, A.M.,
Professor of Music.

JOHN S. C. THOMPSON,
Superintendent of Printing.

FRANCIS H. WHITE, A. M,
Professor of History and Constitutional Law.

CHARLES C. GEORGESON, M. Sc.,
Professor of Agriculture, Superintendent of Farm.

EDWIN B. BOLTON, First Lieut. 23rd U. S. Infantry,
Professor of Military Science and Tactics.

ERNEST REUBEN NICHOLS, A. M.,
Instructor in Physics.

NELSON S. MAYO, D. V. S., M. Sc.,
Instructor in Physiology and Veterinary Science.

ASSISTANTS AND FOREMEN.

Claude M. Breese, M. Sc., *Assistant in Chemistry.*
Jennie C. Tunnell, B. Sc., *Assistant Librarian.*
Julia R. Pearce, B. Sc., *Clerk in Executive Office.*
William Baxter, *Foreman of Greenhouse.*
Charles A. Gundaker, *Foreman of Blacksmith Shop.*
William L. House, *Foreman of Carpenter Shop.*

STUDENT ASSISTANTS.

Bertha H. Bacheller, B. Sc., *English and Mathematics.*
Eliza A. Little, B. Sc., *Sewing and Music.*
Emma A. Allen, B. Sc., *Experiment Station, (Botany.)*
Francis C. Burtis, *Agriculture.*
Phil S. Creager, *Horticulture.*
Sam L. Van Blarcom, *Horticulture.*
George W. Wildin, *Woodwork, Carpenter Shop, and Surveying.*
Frank A. Waugh, *Horticulture and Mathematics.*

Andrew C. McCreary, *Janitor.*

Experiment Station.

COUNCIL.

PRESIDENT FAIRCHILD, *Chairman, ex officio.*
PROFESSOR FAILYER, *Chemistry.*
PROFESSOR POPENOE, *Horticulture and Entomology.*
PROFESSOR KELLERMAN, *Botany.*
PROFESSOR GEORGESON, *Agriculture.*
DOCTOR MAYO, *Veterinary Science.*

I. D. GRAHAM, *Secretary.*

ASSISTANTS AND FOREMEN.

J. T. WILLARD, M. Sc., *Chemistry.*
S. C. MASON, B. Sc., *Horticulture, Foreman of Gardens.*
F. A. MARLATT, B. Sc., *Entomology.*
W. T. SWINGLE, B. Sc., *Botany.**
H. M. COTTRELL, M. Sc., *Agriculture.*
WM. SHELTON, *Foreman of the Farm.*

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*Resigned, May 1, 1891.

Students.

POST-GRADUATES.

RESIDENT.

Emma Agnes Allen, '89, *Physics, Botany and Designing*, Manhattan, Riley.

Bertha Helena Bacheller, '88, *Chemistry and Domestic Economy*, Lyons, Rice.

Lilla A. Harkins, ('90, South Dakota), *Domestic Economy*, Brookings, South Dakota.

Harriet Eusebia Knipe, '90, *Domestic Economy*, Manhattan, Riley.

Albert Barney Kimball, '89, *Botany and Horticulture*, Manhattan, Riley.

Bertha Sarah Kimball, '90, *Entomology and Horticulture*, Manhattan, Riley.

Eliza Ada Little, '86, *Literature and History*, Manhattan, Riley.

Harry Nickels Whitford, '90, *English and History*, Manhattan, Riley.

NON-RESIDENT.

Lyman Hemptead Dixon, '88, *Physics and Engineering*, Denver, Colorado.

David Grandison Fairchild, '88, *Botany and Horticulture*, Washington, D. C.

Clarence E. Freeman, '89, *Physics and Engineering*, Topeka, Shawnee.

Walter Herbert Olin, '89, *Agriculture and Botany*, Waverly, Coffey.

FOURTH YEAR.

William Aaron Anderson,	Leonardville, Riley.
William Sherman Arbuthnot,	Cuba, Republic.
Herman Willard Avery,	Wakefield, Clay.
Judd Noble Bridgman,	Atchison, Atchison.
Robert James Brock,	Centralia, Nemaha.
Francis Charles Burtis,	Manhattan, Riley.
Charles Albert Campbell,	Manhattan, Riley.
Spencer Norman Chaffee,	Green, Clay.
Ephraim Clay Coburn,	Kansas City, Wyandotte.
Gertrude Coburn,	Kansas City, Wyandotte.
Tina Louise Coburn,	Kansas City, Wyandotte.
Rachel Callie Conwell,	Manhattan, Riley.
Christin Mossman Corlett,	Guthrie, *Oklahoma*.
Mary Emmeline Cottrell,	Wabaunsee, Wabaunsee.
Phil Sheridan Creager,	Jamestown, Cloud.
Kary Cadmus Davis,	Junction City, Geary.

Thomas Clarke Davis,	Benedict, Wilson.
Helen Pearl Dow,	Manhattan, Riley.
Anna Della Fairchild,	Manhattan, Riley.
Harry Benson Gilstrap,	Arkansas City, Cowley.
Almon Arthur Gist,	Manhattan, Riley.
Amy Myrtle Harrington,	Junction City, Geary.
Delpha May Hoop,	Manhattan, Riley.
Mayme Amelia Houghton,	Manhattan, Riley.
Willis Wesley Hutto,	Manhattan, Riley.
George Victor Johnson,	Cedar Vale, Cowley.
Frank Mullett Linscott,	Holton, Jackson.
Bessie Belle Little,	Manhattan, Riley.
Albert Edwin Martin,	Atchison, Atchison.
Nellie Evangeline McDonald,	Manhattan, Riley.
David Collins McDowell,	Manhattan, Riley.
Alfred Midgley,	Minneapolis, Ottawa.
Madeleine Wade Milner,	Manhattan, Riley.
Paul Chambers Milner,	Manhattan, Riley.
Harry Elbridge Moore,	North Topeka, Shawnee.
John Otis Morse,	Mound City, Linn.
Hattie May Noyes,	Wabaunsee, Wabaunsee.
Louise Reed,	St. Clere, Pottawatomie.
Artemus Jackson Rudy,	Butler, *Missouri.*
Henry Vernon Rudy,	Butler, *Missouri.*
Lottie Jane Short,	Blue Rapids, Marshall.
Ben Skinner,	Fairview, Brown.
Caroline Scott Stingley,	Manhattan, Riley.
Lillian Alice St. John,	Manhattan, Riley.
Ellis Cheney Thayer,	Maple Hill, Wabaunsee.
Sam L. Van Blarcom,	McPherson, McPherson.
Frank Albert Waugh,	McPherson, McPherson.
Fannie Elizabeth Waugh,	McPherson, McPherson.
Flora Emilie Wiest,	Manhattan, Riley.
George Washington Wildin,	Melvern, Osage.
Bertha Winchip,	Manhattan, Riley.
Alfred Orin Wright,	Manhattan, Riley.
Effie Jeannetta Zimmerman,	Troy, Doniphan.

THIRD YEAR.

Herbert F. Avery,	Wakefield, Clay.
George A. Browning,	Manhattan, Riley.
Edwin Ransom Burtis,	Manhattan, Riley.
Grace Maria Clark,	Junction City, Geary.
George Lemon Clothier,	Paxico, Wabaunsee.
Henry Cowain Cobb,	Muscogee, *Indian Territory.*
Lilian Clyde Criner,	Moundridge, McPherson.
Evered Woodard Curtis,	Council Grove, Morris.

Harry Darnell,	Ward, Wilson.
William H. Edelblute,	Keats, Riley.
Elizabeth Edwards,	Abergele, *Wales*.
Lucy Ellis,	Havensville, Pottawatomie.
John Frost,	Blue Rapids, Marshall.
Effie Gilstrap,	Arkansas City, Cowley.
Ava Hamill,	Olathe, Johnson.
J N Harner,	Green, Clay.
Loyal S. Harner,	Leonardville, Riley.
Charles Pinckney Hartley,	Manhattan, Riley.
John William Abraham Hartley,	Manhattan, Riley.
Robert Clayton Hunter,	Manhattan, Riley.
Charles Augustus Kimball,	Manhattan, Riley.
Fred Swift Little,	Manhattan, Riley.
Samuel Coleman McAdams,	Rossville, Shawnee.
James Laird McDowell,	Manhattan, Riley.
Robert Andrew McIlvaine,	Maryville, *Tennessee*.
George Laine Melton,	Silver Dale, Cowley.
Ernest Stewart Mudge,	Eskridge, Wabaunsee.
Susie Amanda Noyes,	Wabaunsee, Wabaunsee.
Kate Oldham,	Keats, Riley.
Daniel Henry Otis,	Topeka, Shawnee.
Ivan Bryan Parker,	Hill City, Graham.
Charles John Peterson,	Randolph, Riley,
Warner S. Pope,	Cawker City, Mitchell.
Burton Homer Pugh,	Topeka, Shawnee.
Elias W. Reed,	St. Clere, Pottawatomie.
Robert Stirling Reed,	Cedar Point, Chase.
Arthur Daniel Rice,	Manhattan, Riley.
Birdie E. Secrest,	Randolph, Riley.
May Secrest,	Randolph, Riley.
Letus S. Strickler,	Albuquerque, *New Mexico*.
John Eugene Thackrey,	Manhattan, Riley.
Walter James Town,	Topeka, Shawnee.
Walter Percival Tucker,	Douglass, Butler.
Mary Alice Vail,	Detroit, Dickinson.
Robert Lynn Wallis,	Williamsburg, Franklin.
Ora Rebecca Wells,	Irving, Marshall.
Maude E. Whitney,	Manhattan, Riley.
Daniel F. Wickman,	Topeka, Shawnee.
Charles Ernest Yeoman,	La Crosse, Rush.
Isaac Martin Zimmerman,	Troy, Doniphan.

SECOND YEAR.

Clarence Abbott,	Garden City, Finney.
Edward Jones Abell,	Leonardville, Riley.
Walter Truman Allen,	Manhattan, Riley.

Alice Elnora Allingham,	Manhattan, Riley.
Edith Etta Allman.	Manhattan, Riley.
Harry Houston Ashbrook,	Manhattan, Riley.
Inis Florence Avery,	Milford, Geary.
Orville C. Axtell,	Sterling, Rice.
Fred Ward Ayres,	Emporia. Lyon.
Sarah M. Bayles,	Manhattan, Riley.
Nora Baxter,	Marysville, Pottawatomie.
Eben M. Blachly,	Leonardville, Riley.
Maggie Fay Blythe.	Keats, Riley.
John Frank Borden,	Loring, Wyandotte.
Joe William Brooks,	Manhattan, Riley.
William Brown,	Leavenworth, Leavenworth.
Archie Campbell,	Manhattan, Riley.
Margaret Murphia Campbell,	Wall Street, Linn.
Martha Dean Campbell,	Wall Street, Linn.
Ruth I. Carnahan,	Stockdale, Riley.
Robert Abraham Clarke,	Burlington, Coffey.
Mabel Catherine Cornell,	Alma, Wabaunsee.
Martha Amelia Cottrell,	Wabaunsee, Wabaunsee.
*Carl Crump,	Manhattan, Riley.
Edwin McMaster Stanton Curtis,	Council Grove, Morris.
Corinne Louise Daly,	Smith Center, Smith.
Lucy Davidson,	Agricola, Coffey.
David Thomas Davies,	Manhattan, Riley.
Laura Greeley Day,	Manhattan, Riley.
Ione Dewey,	Mound City, Linn.
Albert Dickens,	Alden, Rice.
Luther M. Dickson,	Edgerton, Johnson.
Viola Grace Dille,	Edgerton, Johnson.
Walter Scott Dille,	Edgerton, Johnson.
Clara Belle Dorman,	Wabaunsee, Wabaunsee.
James Edward Dorman,	Wabaunsee, Wabaunsee.
Ida Dougherty,	Manhattan, Riley.
Albert William Dressel,	Meriden, Shawnee.
Mary Louise Finley,	Manhattan, Riley.
Mary Frazier,	Austin, Neosho.
Linnie Gall,	Harveyville, Wabaunsee.
Charles Lawrence Gall,	Harveyville, Wabaunsee.
Mary Maude Gardiner,	Bradford, Wabaunsee.
George C. Gentes,	Council Grove, Morris.
Susie Eliza Hall,	Farmington, Atchison.
Hortensia Harman,	Valley Falls, Jefferson.
John Bright Harman,	Valley Falls, Jefferson,
Ivy Frances Harner,	Leonardville, Riley.
Romeo C. Harner.	Green, Clay.

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* Expelled.

Mark V. Hester,	Haviland, Kiowa.
George Washington Hinkle,	Fortesque. *Missouri.*
Theodore Delbert Hogbin,	Eskridge. Wabaunsee.
Alice C. Hood,	Manhattan. Riley.
Margaretha Elise Horn,	Imperial. *Nebraska.*
Albert Stephen Houghton,	Manhattan. Riley.
Pamelia Hoyt,	Hoytsville, *Utah.*
Sydney Obediah Huffman,	Morgantown, *N. Carolina.*
Mac F. Hulett,	Edgerton, Johnson.
Onie Hulett,	Edgerton, Johnson.
Fred Hulse,	Keats. Riley.
Jessie Stingley Hunter,	Manhattan, Riley.
Charles R. Hutchings,	Pomona. Franklin.
Riley Ingraham,	Manhattan. Riley.
Charles Edward Jennings,	Weskan, Wallace.
Samuel B. Johnson,	Melvern, Osage.
Maude Ethel Knickerbocker,	Long Pine, *Nebraska.*
Bert Albert Knox,	Manhattan, Riley.
Robert McIntosh Laundy,	Wreford. Geary.
Mary Eliza Lyman,	Manhattan, Riley.
Thomas Eddy Lyon.	Riley, Riley.
William Otis Lyon,	Manhattan, Riley.
Charles Wesley McCord,	Leonardville, Riley.
Phœbe McCormick,	Zeandale, Riley.
McLeod Wilson McCrea,	Dunavant, Jefferson.
Edith Rose McDowell,	Manhattan, Riley.
Bertha Virginia McNair.	Manhattan, Riley.
John R. McNinch,	Leonardville, Riley.
John William Mills,	Sue City, Missouri.
William Henry Moore,	Manhattan, Riley.
Elizabeth De Woele Morrison,	Arispie, Pottawatomie.
George Thorp Morrison,	Arispie. Pottawatomie.
William Douglass Morrison,	Arispie. Pottawatomie.
Eusebia De Long Mudge,	Eskridge, Wabaunsee.
Nora Newell,	Manhattan, Riley.
August Fred Niemoller,	Stitt, Dickinson.
James Francis Odle,	Rossville, Shawnee.
Leon Olmstead,	Hill City, Graham.
Louise Amelia Olson,	Garrison, Pottawatomie.
Isaac Belden Paddock.	Manhattan, Riley.
Charles Wesley Pape,	Topeka, Shawnee.
Martha Rosa Pape,	Topeka, Shawnee.
Maude Helen Parker,	Manhattan, Riley.
Henry Leamer Pellet,	Prairie Center, Johnson.
Carl Frederick Pfuetze,	Manhattan, Riley.
Herbert Rice Phillips.	Diamond Springs, Morris.
John Edmund Pierce,	Winfield, *Iowa.*

Mary Louise Pierce,	Winfield, *Iowa.*
Katharine Hall Pierce,	Winfield, *Iowa.*
Frederic Ellsworth Rader,	Manhattan, Riley.
Georgie Phyllis Rees,	Minneapolis, Ottawa.
Ada Rice,	Manhattan, Riley.
John De Witt Riddell,	Conway, McPherson.
Blanche Maude Riggle,	Louisville, Pottawatomie.
Isaac Archie Robertson,	Manhattan, Riley.
John Albert Rokes,	Onaga, Pottawatomie.
Minnie Louisa Romick,	Manhattan, Riley.
Winnie Luella Romick,	Manhattan, Riley.
Charles Baxter Selby,	Manhattan, Riley.
Jennie May Selby,	Manhattan, Riley.
Clara Alice Short,	Blue Rapids, Marshall.
John Andrew Smallwood,	Manhattan, Riley.
Charlie Chrisfield Smith,	Manhattan, Riley.
Fred Raymond Smith,	Oxford, Sumner.
George Wildman Smith,	Manhattan, Riley.
William Elmer Smith,	Oxford, Sumner.
Ralph K. Snow,	Hoge, Leavenworth.
Wesley O. Staver,	Dallas, *Missouri.*
John Stingley,	Manhattan, Riley.
Ruth Tipton Stokes,	Garnett, Anderson.
James Benedict Sutton,	Russell, Russell.
John Edwin Taylor,	Berryton, Shawnee.
William Thomas Taylor,	Onaga, Pottawatomie.
Joseph B. Thoburn,	Peabody, Marion.
Charles Henry Thompson,	Bakersfield, *California.*
Dora Thompson,	Irving, Marshall.
George K. Thompson,	Irving, Marshall.
William M. Town,	Calabasas, *Arizona Ter.*
Phœbe Carey Turner,	Rock Creek, Jefferson.
Fritz Johannus Fredericus Van Benthem von den Bergh,	The Hague, *Holland.*
Robert Edward Walker,	Grenola, Elk.
Herman Brickley Walter,	Hillsdale, Miami.
Julia Winifred Westgate,	Manhattan, Riley.
John C. Wilkin,	Bow Creek, Phillips.
Jessie Chase Whitney,	Manhattan, Riley.
Clara Belle Whitelock,	Bluff, Harper.

FIRST YEAR.

Raymond Barrington Abbott,	Garden City, Finney.
Emma Elizabeth Adams,	Manhattan, Riley.
David Ewing Ainsworth,	Ochiltree, Johnson.
Flora Evelina Allingham,	Manhattan, Riley.
William Thomas Anderson,	Parsons, Labette.

Leonard Smith Avery,	Shields, Lane.
Charles Antoine Bailey,	LaCrosse, Rush.
Gertie Lenore Baker,	Eskridge, Wabaunsee.
Mabel Ballard,	Ballard's Fall, Washington.
Erskine Alonzo Barber,	Parsons, Labette.
Alfonso K. Barnes,	Dover, Shawnee.
Frederick J. Bartel,	Topeka, Shawnee.
Eva Bartlett,	Poe, Ottawa.
Pearl Bartlett,	Poe, Ottawa.
Franklin Fairbanks Baxter,	Manhattan, Riley.
Frank Beach,	Havensville, Pottawatomie.
Edward Lee Beard,	Wellington, Sumner.
Carrie Amelia Beatty,	Leavenworth, Leavenworth.
Herbert John Bender,	Topeka, Shawnee.
Rubert Bender,	Topeka, Shawnee.
George Gordon Boardman,	Centralia, Nemaha.
Mamie Bowers,	Marysville, Marshall.
Arthur Wiltshire Brewer,	Manhattan, Riley.
Carrie Brewer,	Ogden, Riley.
Lida Brewer,	Ogden, Riley.
Albert Leo Brooks,	Salina, Saline.
Mary Brooks,	Manhattan, Riley.
Hyman E. Brown,	Topeka, Shawnee.
Roy Brown,	Manhattan, Riley.
Henry Edwin Buehler,	Hiawatha, Brown.
William Henry Busch,	St. George, Pottawatomie.
James Marion Calhoun,	New Murdock, Kingman.
Clarence Asa Chandler,	Argentine, Wyandotte.
Marshall Chandler,	Argentine, Wyandotte.
Frank E. Cheadle,	Ulysses, Grant.
John Cornelius Christensen,	Clarkson, Riley.
Earle Allen Clark,	Greenleaf, Washington.
Sydney, Clark,	Emporia, Lyon.
Lorena Estella Clemons,	Alida, Geary.
Asa Martin Cobb,	Palco, Rooks.
Sherman Page Coe,	Manhattan, Riley.
Almond J Coen,	Half Way, Cloud.
John S. Coleman,	Menoken, Shawnee.
Warren Conner,	El Dorado, Butler.
Creed Conwell,	Manhattan, Riley.
Florence Ruth Corbett,	Manhattan, Riley.
Ernest Brown Coulson,	Anthony, Harper.
Alverta May Cress,	Manhattan, Riley.
Mary Elizabeth Crum,	Stockdale, Riley.
Elsie Emeline Crump,	Manhattan, Riley.
Grace Hannah Dalton,	St. George, Pottawatomie.
Curtis Darnell,	Earlton, Neosho.

Fannie Gillispie Davis,	Grand Haven, Shawnee.
Sarah Lillian Davis,	Oskaloosa, Jefferson.
Mrs. Dora Ann Dawson,	Yates Center, Woodson.
James Curtain Dawson,	Yates Center, Woodson.
Daisy Day,	Onaga, Pottawatomie.
Flora Day,	Onaga, Pottawatomie.
Lafayette Devault,	Olathe, Johnson,
George Henry Dial,	Cleburne, Riley.
Hala Dial,	Stockdale, Riley.
Lillie C. Dial,	Cleburne, Riley.
Eva Eliza Dickson,	Edgerton, Johnson.
Justinia Wilhelmina Dieter,	Oak Hill, Clay.
Harriett Elizabeth Dodson,	Wakefield, Clay.
George Doll,	Larned, Pawnee.
Earnest A. Donaven,	Agra, Phillips.
John Dougherty,	Manhattan, Riley.
Fred George Dow,	Manhattan, Riley.
Mary Elizabeth Dowden,	Minneapolis, Ottawa.
Horatio Edward Downing,	Downs, *Oklahoma.*
Jessie Downing,	Oxford, Sumner.
Frank J. Downs,	Lyndon, Osage.
Olive May Drake,	Manhattan, Riley.
Victor Eckart,	Minneapolis, Ottawa.
Marshall Columbus Edwards,	Vinton, Cowley.
Bertha Louise Elkins,	Wakefield, Clay.
Victor Emrick,	Seely, Cowley.
Jephthah W. Evans,	Manhattan, Riley.
Sarah Jane Evans,	Riley, Riley.
Clyle Farman,	Manhattan, Riley.
Sprague Farman,	Manhattan, Riley.
Sadie May Farmer,	Cawker City, Mitchell.
Charlotte Finley,	Parallel, Washington.
Emma Susan Finley,	Parallel, Washington.
Josephine Finley,	Manhattan, Riley.
Mary Loretta Findley,	Fremont, Graham.
Harry T. Fish,	La Crosse, Rush.
George Forsythe,	Howard, Elk.
Howard Shearer Fritz,	Newton, Harvey.
Mildred Christine Frost,	Manhattan, Riley.
Eugene Leonard Frowe,	Louisville, Pottawatomie.
Florence Eleanor Fryhofer,	Randolph, Riley.
George William Fryhofer,	Randolph, Riley.
Waldo Parkhurst Gahan,	Manhattan, Riley.
Clayton Isaac Gall,	Harveyville, Wabaunsee.
Mary Galloway,	Myers Valley, Pottawatomie
David N. Gamble,	Lansing, Leavenworth.
Ernest A. Gardiner,	Wakarusa, Shawnee.

John Garrett,	Centropolis, Franklin.
Herman H. Gerardy,	Fact, Clay.
Mabel Gibbs,	James, *Iowa.*
Ernest W. Gilkerson,	Willard, Shawnee.
Harvey G. Gilkerson,	Willard, Shawnee.
Marion Gilkerson,	Willard, Shawnee.
Lucelia Newell Gill,	Paxico, Wabaunsee.
Willard Ashley Gilson,	Alton, Osborne.
Edward William Marble Ginter,	Waldron, *Missouri.*
Fred Ginter,	Valley Falls, Jefferson.
Garrett Walter Ginter,	Valley Falls, Jefferson.
Plumb Radical Goss,	Lansing, Leavenworth.
Bert Waldron Green,	Manhattan, Riley.
Charles Shepard Green.	Manhattan, Riley.
Joseph E. Gregory,	Mt. Ayr, Osborne.
Etta Ellen Griffin,	Milford, Geary.
Charles Sumner Hagerman,	Vinland, Douglas.
Carrie Elizabeth Hall,	Bateham, Clay.
Oscar Hugo Halstead,	Leonardville, Riley.
Maria Glen Hanlin,	Osborne, *Missouri.*
David H. Hanline,	Almena, Norton.
Samuel McCreedy Hanlon,	Orie, Sumner.
William Lesley Hanlon,	Orie, Sumner.
Gertrude Hardy,	Manhattan, Riley.
Llewellyn Hardy,	Manhattan, Riley.
Walter Eugene Hardy,	Manhattan, Riley.
Elizabeth Lynn Hartley,	Manhattan, Riley.
Arthur Charles Haulenbeck,	Manhattan, Riley.
Gertrude Evangeline Haulenbeck,	Manhattan, Riley.
Marie Haulenbeck,	Manhattan, Riley.
Philip Hay,	Junction City, Geary.
Blanche Etta Hayes.	Manhattan, Riley.
Edgar Heath,	Randolph, Riley.
Lorena Marguerite Helder,	Manhattan, Riley.
Abraham Hudson Hepler,	Manhattan, Riley.
Clarence Hepler,	Manhattan, Riley.
Charles E. Herynk,	Hanover, Washington.
Everett Lewis Higinbotham,	Myers Valley, Pottawatomie
Samuel Vincent Henry Hogbin,	Eskridge, Wabaunsee.
Albert Hogue,	Barnes, Washington.
Bertie Turner Holderman,	Chetopa, Labette.
Albert David Holmes,	Gaylord, Smith.
Mrs. Clara Effie Holroyd.	Manhattan, Riley.
Clarence V. Holsinger,	Rosedale, Wyandotte.
Alice Horton,	Manhattan, Riley.
John Burbidge Hoyt,	Kamas, *Utah.*
Martha Hoyt,	Kamas, *Utah.*

Charles Gibson Huey,	Downs, Osborne.
Alonzo Hunter,	Eskridge, Wabaunsee.
John L. Hunter,	Manhattan, Riley.
Howard E. Hupp,	Howard, Elk.
Henry Dallas Huxley,	Princeton, Franklin.
Frank William Irvin,	Manhattan, Riley.
Andrew Jackson,	Lincoln, Lincoln.
Mary Jacobs,	Clark, *South Dakota.*
William John Jennings,	Manhattan, Riley.
Abram Johnson,	Melvern, Osage.
Christian Andrick Johnson,	Success, Russell.
John James Johnson, jr.,	Success, Russell.
Fred Ralph Jolly,	Atwood, Rawlins.
Marian Elizabeth Jones,	Manhattan, Riley.
Isaac Jones, jr.,	Ada, Lincoln.
Tom Lormos Jones,	Manhattan, Riley.
William Irvin Joss,	Fairview, Brown.
Olive Jane Kearns,	Manhattan, Riley.
Peter Guin Keele,	Manhattan, Riley.
Rosella Kelly,	Ogden, Riley.
Charles Nash Kenyon,	Cawker City, Mitchell.
Orlin Sereno Kenyon,	Concordia, Cloud.
Ben John Kimball,	Manhattan, Riley.
John Milton Kimball,	Manhattan, Riley.
Stella Victoria Kimball,	Manhattan, Riley.
Udah Sheldon King,	Vinland, Douglas.
Charles Henry Kinzie,	Hiawatha, Brown.
Lizzie M. Knox,	Clyde, Cloud.
Ambrose W. Krotzer,	Manhattan, Riley.
James Sproat Lamm,	Lansing, Leavenworth.
Kate Law,	Brownell, Ness.
Perry Law,	Brownell, Ness.
Calvin Harvey Leonard,	Lebo, Coffey.
Cortes Dawson Lesley,	Culver, Ottawa.
Bolsir Lichtenhan,	Junction City, Geary.
Davis Eugene Linden,	Bristow, Osborne.
Rose Loader,	Bateham, Clay.
Charles W. Lyman,	Manhattan, Riley.
Charles Henry Manly,	Junction City, Geary.
Eugene Marshall,	Manhattan, Riley.
Sarah B. Marshall,	Manhattan, Riley.
Janna Mary Martin,	Eskridge, Wabaunsee.
Charles Dwin McCauley,	Wilburn, Ford.
Charles Delbert McCullough,	Rossville, Shawnee.
Martha A. McCullough,	Delevan, Morris.
Olive H. McCullough,	Delevan, Morris.
Maude McDonald.	Leeds, *Missouri.*

Lee McGrath,	Beloit, Mitchell.
George Vernon McKeever,	Valley Falls, Jefferson,
George Reford McLeavy,	Dwight, Morris.
George Taylor McNair,	Manhattan, Riley.
Joseph Jerome McNamee,	Junction City, Geary.
Frank Thomas McNinch,	Leonardville, Riley.
Alfred C. McVay,	Wreford, Geary.
Rhodes Benjamin Mead,	Maple City, Cowley.
Ward Cadwell Mead,	Maple City, Cowley.
Elizabeth Ida Meyers,	Manhattan, Riley.
Bessie Matilda Miller,	Dover, Shawnee.
David Hale Miller,	Dover, Shawnee.
James Miller,	Topeka, Shawnee.
Nannie Martha Mills,	Riley, Riley.
John Mitchell,	North Topeka, Shawnee.
Oliver L. Mitchell,	Groveland, McPherson.
Minnie Minerva Moffett,	Manhattan, Riley.
Daniel Estol Moore,	Manhattan, Riley.
Inez Vienna Moore,	Randolph, Riley.
Oscar Brown Moore,	Cawker City, Mitchell.
Rosalie Moore,	Stark, Neosho.
Scott Roscoe Moore,	Holton, Jackson.
Mabel Maude Moser,	Silver Lake, Shawnee.
Stephen Needham,	Lane, Franklin.
Frank Danforth Nettleton,	Burlingame, Osage.
Albert Boyer Newell,	Randolph, Riley.
Eva Gertrude Nichols,	Dover, Shawnee.
Ellen Augustus Sophia Nilson,	Manhattan, Riley.
Lillian Oldham,	Keats, Riley.
Jacob Clarke Osgood,	Florence, Marion.
Oscar Albert Otten,	Brenner, Doniphan.
Pearl Hiram Pagett,	Beloit, Mitchell.
Ida Rebecca Pape,	Topeka, Shawnee.
Inez Ethel Parker,	Hill City, Graham.
Curtis Zimmerman Patton,	Fall River, Greenwood.
Charles Randolph Pearson,	Collyer, Trego.
Clara Jane Pender,	Pueblo, Colorado.
James Henry Persinger,	Canton, McPherson.
Will Oscar Peterson,	Randolph, Riley.
William H. Phipps,	Chapman, Dickinson.
Alexander Calvin Pike,	Westmorel'd, Pottawatomie
Emma Dell Pike,	Westmorel'd, Pottawatomie
Charles Stephen Pope,	Cawker City, Mitchell.
Horace Greeley Pope,	Cawker City, Mitchell.
Hiram Pratt,	Manhattan, Riley.
Lottie Loreina Puckett,	Riley, Riley.
Clara Belle Ramsey,	St. Marys, Pottawatomie.

Cora Reece,	May Day, Riley.
Charles Duncan Rees,	Delphos, Ottawa.
William Francis Redenbaugh,	Edgerton, Johnson.
Robert Rehfeld,	Manhattan, Riley.
Ambrose E. Ridenour,	Formoso, Jewell.
James Ritchie,	Havershill, Butler.
Forrest Debree Robinson,	Burlingame, Osage.
William Walter Robison,	Yates Center, Woodson.
Mrs. Mary I. Rockefeller,	Russell, Russell.
Anna Rollason,	Geuda Springs, Cowley.
Beulah Melvin Royce,	Carleton, Dickinson.
Charles Albert Rudisill,	Emporia, Lyon.
Joe Salveson,	Girard, Crawford.
Edward Sandell,	Manhattan, Riley.
Victor Irvin Sandt,	Alden, Rice.
John Wesley Sayre,	Cedar Point, Chase.
Milton Andrew Scates,	Kanopolis, Ellsworth.
Rose Scates,	Kanopolis, Ellsworth.
John Alfred Scheel,	Emporia, Lyon.
Eugene E. Schmitz,	Alma, Wabaunsee.
Erna Augusta Schroll,	Chepstow, Washington.
Joseph Schroll,	Chepstow, Washington.
Augusta Alvine Wilhelmine Schüneman,	Burzen, *Germany.*
Alfred K. Seager,	Blue Rapids, Marshall.
Thomas Bartlett Sears,	Tescot, Ottawa.
Lillian Gertrude Secrest,	Randolph, Riley.
Jake Ulrich Secrest,	Randolph, Riley.
Mabel Gertrude Selby,	Manhattan, Riley.
Abraham H. Severn,	Agricola, Coffey.
George Chapman Seymour,	Burlingame, Osage.
Fred Shaw,	Portis, Osborne.
Elida May Shearer,	Rossville, Shawnee.
Annie Maud Shipman,	Elmdale, Chase.
Alice Myrtle Shofe,	Manhattan, Riley.
Gertrude Werden Shofe,	Manhattan, Riley.
Charles Wesley Shull,	Manhattan, Riley.
Richard Simmons,	Cora, Smith.
George William Simms,	New Helena, *Nebraska.*
Ellen Sites,	Hays City, Ellis.
Lavinia Sjoquist,	Eskridge, Wabaunsee.
Emma Elnora Skow,	Leonardville, Riley.
Albert Edwin Smith,	Potwin, Butler.
Jennie Dean Smith,	Manhattan, Riley.
Pardy Cullen Smith,	Luray, Russell.
Sallie Smith,	Bigelow, Marshall.
George William Smith,	Mankato, Jewell.
Thomas H. Smyth,	Beloit, Mitchell.

Lilly May Sparks,	Ludell, Rawlins.
John Speidel,	Poast Town, *Ohio.*
Amos Collins Spencer,	Gove, Gove.
Albert Reid Spencer,	Gove, Gove.
Robert Lee Stafford,	Leonardville, Riley.
Ida May Staver,	Dallas, *Missouri.*
Howard C. Stephenson,	Clements, Chase.
Joseph Stephens,	Willard, Shawnee.
Anna Bell Stewart,	Dover, Shawnee.
William Henry Stewart,	Winchester, Jefferson.
Fairy Josephine Strong,	Manhattan, Riley.
Cora Adella Stump,	Corning, Nemaha.
Emma Catharine Stump,	Corning, Nemaha.
Robert Von Volson Sutherland,	Berryton, Shawnee.
Miriam Esther Swingle,	Manhattan, Riley.
Frances Eleanor Thackrey,	Manhattan, Riley.
Franklin Albert Thackrey,	Manhattan, Riley.
Jeanne Brown Thomas,	Minneapolis, *Minnesota.*
Elmer Thomas Thompson,	Smith Center, Smith.
Mary Diantha Thompson,	Wamego, Pottawatomie.
Murray Tiffany,	Barnesville, Bourbon.
Delbert Timbers,	Beloit, Mitchell.
Jessie May Tinkham,	Kansas City, *Missouri.*
Joseph Towers,	Manhattan, Riley.
William Mathew Towers,	Manhattan, Riley.
Joseph Lewis Treu,	Halifax, Wabaunsee.
Frank George Trzaskowsky,	Junction City, Geary.
Corinne Tucker,	Clinton, Douglas.
Eva S. Vincent,	Argonia, Sumner.
Samuel R. Vincent,	Argonia, Sumner.
Ellsworth Giles Voiles,	Manhattan, Riley.
Olive Voiles,	Manhattan, Kiley.
Ida May Walter,	Hillsdale, Miami.
Hilda Germania Walters,	Manhattan, Riley.
George Walter Washington,	Manhattan, Riley.
Edgar Isaac Washington,	Manhattan, Riley.
Wilbur Winfield Watson,	Beeler, Ness.
John Wybro Webb,	Green, Clay.
Grace Greenwood Wells,	Manhattan, Riley.
George Wright West,	Topeka, Shawnee.
Ernest Louis Wetzig,	Winkler's Mills, Riley.
Fannie Mary Wetzig,	Winkler's Mills, Riley.
Hannah Amelia Wetzig,	Winkler's Mills, Riley.
Myrtle Caroline Whaley,	Manhattan, Riley.
Melvin Wheeler,	Canton, McPherson.
Casey Oran Whitford,	Manhattan, Riley.
Jessamine Whitford,	Manhattan, Riley.

Mary Elizabeth Willard,	Wamego, Pottawatomie.
John Melancthon Williams,	Edgerton, Johnson.
May Lizzie Winters,	St. Marys, Pottawatomie.
Edgar Wood,	Rossville, Shawnee.
Orlanda Andrew Wright,	Yates Center, Woodson.
Lenora Pearl Wycoff,	Manhattan, Riley.
Frank Yeoman,	Lippard, Rush.
Charles D. Young,	Yates Center, Woodson.
Joseph Ulysses Zimmerman,	Olathe, Johnson.

SUMMARY.

	Gentlemen.	*Ladies.*	*Total.*
Post-graduate	6	6	12
Fourth-year	31	22	53
Third-year	38	12	50
Second-year	80	55	135
First-year	217	126	343
Totals	372	221	593

From 73 counties of Kansas, 555; from 20 other States, 38; applicants not enrolled, 26.

Objects and Methods.

ENDOWMENT AND RESOURCES.

An act of Congress, approved July 2d, 1862, gave to each State public lands to the amount of 30,000 acres for each of the Senators and Representatives in Congress according to the census of 1860, for the "endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Under this act the State of Kansas received 82,313.53 acres of land, and, in 1863, established the State Agricultural College, by endowing with these lands Bluemont College, which had been erected two miles from Manhattan under the auspices of the M. E. Church, but was presented to the State for the purpose named in the act of Congress.

In 1873 the College was reorganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 215 acres, one mile from the city of Manhattan. On this fine location the State has erected buildings valued at $135,000, of which a description is given elsewhere. The farm and grounds, furniture, stock, and other illustrative apparatus are valued at over $130,000. All the lands have been sold, giving a fund of $501,426.33, which is by law invested in bonds, the interest alone being used for the current expenses of the College.

The annual income from the endowment fund — about $32,000 — is supplemented by an appropriation under an act of Congress approved August 30, 1890, of $15,000 for 1890, $16,000 for 1891, $17,000 for 1892 and a sum increasing each year by $1,000 until the annual amount shall be $25,000. This fund is "to be applied only to instruction in agriculture, the mechanic arts and the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." "No portion of said moneys shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings."

All expense of instruction is thus provided for, and the State is left to erect the necessary buildings and meet expenses in management of the funds.

Under an act of Congress, approved March 7th, 1887, the College receives, by general appropriation in Congress, $15,000 each year for the maintenance of an Experiment Station "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The property of the Station, including a building erected especially for its use, amounts to more than $10,500.

OBJECTS.

This College now accomplishes the objects of its endowment in several ways:

First it gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second, it teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, botany, entomology, zoōlogy, and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants, and animals themselves illustrates and fixes the daily lessons. At the same time, lessons in agriculture, horticulture, and household economy show the application of science; and all are enforced by actual experiment.

Third, it trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm, and household departments is made a part of a general education to usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth, it strives to increase our experimental knowledge of agriculture and horticulture. The provision for extensive and accurate researches made by establishing the Experiment Station as a distinct department of the College, offers assurance of more definite results than can be obtained by ordinary methods. The professors of Agriculture, Horticulture, Chemistry, Botany, and Veterinary Science, together with the President of the College, form the Experiment Station Council, by authority of which experiments are undertaken and carried on in the several departments, under the special supervision of the Professors. These touch "the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

The bulletins of the Station, issued at least as often as once in three months, are sent, according to law, free of postage, to all newspapers in the State, and "to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." Correspondence with reference to bulletins and experiments is welcomed, and may be addressed to the several members of the Council.

Fifth, it seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose it publishes the weekly *Industrialist.* Its officers also share in the debates and consultations of farmers and horticulturists throughout the State. Each winter a series of ten Farmers' Institutes is held in as many different counties of the State. In these the Faculty share with the people in lectures, essays, and discussions upon topics of most interest to farmers. These institutes have brought the College into more direct sympathy with the people and their work, so as to make possible a more general dissemination of the truths presented; and permanent organizations for the same purpose in many counties are increasing. Correspondence upon such questions is invited by all members of the Faculty, and applications for institutes are desired from all parts of the State.

COURSE OF STUDY.

The necessity for so adjusting various branches of a course of study that there shall be as little waste as possible in acquiring both information and discipline, is felt by every teacher. Such a course is not designed to be absolutely inflexible, but to guide the judgment into some definite line of progress from which no mere whim shall turn a student aside.

Each student is expected to take three studies besides one hour's daily practice in an industrial art; and variations from this rule can be made only with the consent of the Faculty.

Parallel courses are offered to both sexes, with such differences as their necessities seem to call for. The following gives the general scope of the two, but fuller explanations are found under OUTLINE OF INSTRUCTION:

FIRST YEAR.

FALL TERM: Algebra.
English Analysis.
Geometrical Drawing.
Industrial.

Winter Term: Algebra.
English Composition.
Book-keeping.
Free-hand Drawing three times a week.
Industrial.
Spring Term: Algebra.
English Structure.
Botany.
Industrial (Carpentry or Sewing).

SECOND YEAR.

Fall Term: Geometry.
Elementary Chemistry.
Horticulture.
Industrial.
Winter Term: Geometry completed, Projection Drawing.
Agriculture or Household Economy.
Organic Chemistry and Mineralogy.
Twelve Lectures in Military Science.
Industrial (Cooking).
Spring Term: Anatomy and Physiology.
Entomology.
Analytical Chemistry.
Twenty Lectures in Military Science.
Industrial (Farm and Garden or Dairy).

THIRD YEAR.

Fall Term: Trigonometry and Surveying.
Agricultural Chemistry.
General History.
Industrial (Farm and Garden).
Winter Term: Mechanics.
Constitutional History and Civil Government.
Rhetoric.
Industrial.
Spring Term: Civil Engineering or Hygiene.
Physics.
English Literature.
Perspective Drawing two hours a week; Drafting two hours.
Industrial.

FOURTH YEAR.

Fall Term: Agriculture or Literature.
Physics and Meteorology.
Psychology.
Industrial.

WINTER TERM: Logic, Deductive and Inductive.
Zoölogy.
Structural Botany.
Veterinary Science or Floriculture.
Industrial.

SPRING TERM: Geology.
Political Economy.
An elective in Agriculture, Horticulture, Mechanics, or related sciences.
Industrial.

CLASS HOURS, 1891-92.

	HRS.	SPECIAL.	FIRST YEAR.			SECOND YEAR.			THIRD YEAR.		FOURTH YEAR.	
FALL TERM (14 wks).	I.	Drawing.	Algebra.	English.	Industrial.	Industrial.	Horticulture.	Algebra.	General History.	Trigonometry & Surveying.	Agriculture.	Literature.
	II.	Botany.	English.	Industrial.	Drawing.	Horticulture.	Algebra.	Industrial.	Industrial.	Gen'l History.	Psychology.	
	III.	Book-keep'g.	Drawing.	Algebra.	English.	Chemistry.	Industrial.	Horticulture.	Trigonometry & Surveying.	Physiology.	Physics.	Industrial.
	IV.	Arithmetic.	Industrial.	Drawing.	Algebra.	Algebra.	Industrial.	Chemistry.	Physiology.	Industrial.	Industrial.	Physics.
	V.	Drill.	Drill and Rhetoricals.			Drill, Rhetoricals, and Chemical Practice.			Surveying Practice.		Drill and Rhetoricals.	
WINTER TERM (12 weeks).	I.	U. S. History.	Book-keeping.	English Composition.	Algebra.	Agriculture.	Industrial.	Household Economy.	Agricultural Chemistry.		Botany.	Zoology.
	II.	English Analysis.	Algebra.	Book-keeping.	English Composition.	Industrials.	Agriculture.	Geometry.	Mechanics.	Industrial.	Zoology.	Botany.
	III.	Industrial.	English Composition.	Drawing 3 times a week. Drill.	Book-keeping.	Chemistry 6 wks. Mineralogy.	Geometry.	Chemistry 6 wks. Mineralogy.	Industrial.	Mechanics.	Logic.	
	IV.	Arithmetic.	Industrial.	Algebra.	Drawing 3 times a week.	Geometry.	Chemistry 6 wks. Mineralogy.	Blowpipe Analysis.	Rhetoric.		Veterinary Science.	Floriculture.
	V.	Drill.	Drawing 3 times a week. Drill.	Industrial.	Industrial.	Military Science. Blowpipe Analysis.		Industrial.	Rhetoricals and Drill.		Industrial.	
SPRING TERM (11 weeks).	I.	English.	Industrial.	Botany.	Algebra.	Entomology.	Analytical Chemistry.		English Literature.		U. S. Constitution.	Geology.
	II.	Industrial.	Botany.	Industrial.	English Structure.	Geometry and Drawing.			Hygiene.	Civil Engineering.	Geology.	U. S. Constitution.
	III.	Book-keeping.	Algebra.	English Structure.	Industrial.	Analytical Chemistry.	Entomology.	Drawing and Geometry.	Physics.	Industrial.	Political Economy.	
	IV.	Arithmetic.	English Structure.	Algebra.	Botany.		Geometry and Drawing.	Entomology.	Industrial.	Physics.	Industrial.	
	V.		Rhetoricals and Drill.			Military Science, Drill, and Dairying.			Drawing, Rhetoricals.		Drill, Rhetoricals.	

Industrial Training.—Closely adjusted to the course of study is industrial training in several of the arts, to which each student is required to devote at least one hour a day. Among the lines of training each student may select, with the approval of the Faculty, except in terms when special industrials are required. Young men may have Farming, Gardening and Fruit-growing, Carpentry, Cabinet-making, Iron-work, or Printing. Young women may take Sewing, Printing, Floriculture, or Music.

All young men must have their industrials for one term in the carpenter shop before completing the first year; and during the spring term of the second year and the fall term of the third year, upon the farm, garden, and orchards. Young women take their industrial for one term of the first year in sewing, and for the winter and spring terms of the second year in the kitchen laboratory and dairy.

The daily routine requires chapel at 8:30 A.M., and classes from 8:50 A.M. to 1 P.M., as shown under "Class Hours." Class rhetorical exercises are held weekly. Military drill is twice a week. On every Friday afternoon, at 1:30, all attend the public lecture or rhetorical exercises in chapel.

Special Courses.—Persons of suitable age or advancement who desire to pursue such branches of study as are most directly related to agriculture or other industries may select such studies under the advice of the Faculty. Assaying and Pharmaceutical Chemistry may be provided for by special arrangement when students are qualified to pursue them.

Post-Graduate Courses.—Arrangements can be made for advanced study in the several departments at any time. Special opportunities for investigation and research will be afforded at all times to resident graduates in Agriculture and Agricultural Chemistry, Physics and Chemistry, Horticulture and Botany, Zoölogy and Entomology, Mathematics, Engineering and Drafting. Every facility for advancement in the several arts taught at the College will be given such students, though they are not required to pursue industrial training while in these courses.

Degrees.—The degree of Bachelor of Science is conferred upon students who complete the full course of four years and sustain all the examinations.

The degree of Master of Science is conferred in course upon graduates who comply with the following conditions:

1. Each candidate shall furnish evidence satisfactory to the Faculty of proficiency in at least one of each of the groups of arts and sciences here named:

ARTS.	SCIENCES.
Agriculture.	Botany.
Horticulture.	Chemistry.
Engineering.	Zoölogy.
Architecture and Designing.	Entomology.
Domestic Economy.	Physics.

2. Each candidate must present for consideration by the Faculty a satisfactory thesis, involving original researches in line with one or the other of the courses pursued as above, and shall deposit a perfect copy in the College library.

3. Application to the Faculty for sanction of the lines of study and research selected should be made as early as the first day of November, and the subject of the thesis must be settled upon as soon as the first day of January preceding the Commencement at which the degree is expected.

4. Candidates must be from graduates of three or more years' standing, unless a post-graduate course of one year or more has been pursued at this College, in which case the second degree may be conferred two years after graduation.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and Professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of Master of Science may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the Master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

2. His post-graduate study shall have been in line with that required of graduates of this College, as published in our Catalogue.

3. He must make application for the degree on or before the first day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1st an abstract of the thesis must be submitted to the Faculty.

5. Before May 15th the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

OUTLINE OF INSTRUCTION.

Agriculture — *Second Year.*—History of agriculture, showing the successive steps by which the art has attained its present position. History and characteristics of breeds: their adaptation to the varying conditions of soil, climate, and situation; study of the forms of animals, as shown by the different breeds belonging to the College; the relation of stock-raising to general farming. Cultivation of hoed crops; management of corn and roots with reference to stock-feeding, and the growth of the finer grains. The growth of the "tame grasses," in Kansas: the best sorts for the State, and their management, as shown by experience upon the College farm and elsewhere. Implements of simple tillage: mechanical principles involved in their construction. Application of labor. Draught: different adjustments as affecting draught; use of the dynanometer. Plows for soil and subsoil. Drainage: soils that need draining; how to lay out a system of drains.

Fourth Year.—General principles governing the development of domestic animals: the laws of hereditary disease — of normal, abnormal, and acquired characters; atavism; correlation in the development of parts; in-and-in breeding and cross-breeding; influences affecting fecundity. The selection and arrangement of the farm with reference to the system to be pursued. Rotation of crops: general advantages of a rotation; the best rotation for the distribution of labor, production of manure, and extermination of weeds. Planning farm buildings — barns, piggeries, and stables. Manure: how best housed and applied; composting; commercial fertilizers. Agricultural experiments; field and feeding experiments. Stock-feeding and meat production: stall-feeding; soiling.

Books of Reference.—Journal of the Royal Agricultural Society of England, Morton's Cyclopedia, Low's Practical Agriculture and Domesticated Animals, Ribot on Heredity, Farmer's Calendar, Allen's American Farm-Book, The Complete Grazier, Stephen's Book of the Farm, Thomas's Farm Implements, Waring's Draining for Profit and Health, the Reports of our own and other State Boards of Agriculture, and Shorthorn, Scotch Polled, Jersey, Berkshire, and Poland-China Herd-Books.

Horticulture.—It is the aim to teach this art from a botanical basis. The student applies his knowledge of the prime facts in botanical physiology to the various operations of the nursery, orchard and farm. Instruction is given by a series of lectures upon the following topics, among others: The scope of Horticulture. General principles of propagation — by buds, by seeds. Production of improved varieties — by careful selection of seeds, by interfertilization of known kinds. Perpetuation of valuable sorts of fruits by bud propagation — budding, grafting, layering, etc. The important points in nursery manipulation. The orchard: conditions of site, soil, exposure, elevation; special treatment of different kinds of fruit trees; pruning; gathering and storing fruits. Small-fruit culture; list of varieties suitable for Kansas planting. Vegetable garden; selection and preservation of seeds; planting and transplanting; the management and use of hot-bed and cold-frame. Forest plantations. Wind-breaks. Hedges. Trees and shrubs for ornamental planting.

In the winter term of the fourth year the young women study "Floriculture," the subject including general green-house management, the treatment of plants in window-gardening, the growing of flowering plants in the open air, the destruction of plant pests, etc.; practice in the plant-houses alternating with lectures on these topics.

Books of Reference.—The horticultural works of Downing, Warder, Fuller, Thomas, Loudon, Henderson, and other standard authorities; the best horticultural periodicals in the English language; the Horticultural Reports of the States of Kansas, Michigan, Illinois, Iowa, Missouri, Massachusetts, California, and others. The transactions of various horticultural societies, American and English. In Landscape Gardening, the works of Downing, Weidenmann, and Kemp.

Entomology.—This science is studied with special reference to its economic relations with agriculture and horticulture. A brief course in the principles of classification is followed by a more extended study of the life-history of beneficial and injurious insects, and means for encouragement of the one and for control of the other.

The instruction is presented in the form of lectures. Illustrations are furnished from the individual collections of the students, and from the entomological collections belonging to the College. Charts and drawings from nature are used to illustrate points of value in classification. The pocket lens used in botany is required in this study.

Books of Reference.—The works of Packard, Harris, Riley, Fitch, Forbes, Lintner, Westwood, Ratzeling, and others. Reports of the United States Entomologist, Transactions of the American Entomological Society, Canadian Entomologist, Psyche, and other publications.

Botany.—During the College course two terms are given to the study of Botany.

Elementary Botany.—In the spring term of the first year, the organs of plants are first studied, after which the minute anatomy is briefly considered. This is followed by a study of vegetable physiology.

The classification of plants, vegetable products and their uses, are other important topics of the course. During a part of the term a number of flowers are analyzed, and a few plants collected and prepared for the herbarium. Each student is required to provide himself with a pocket lens, under the direction of the professor in charge. Text-book, Kellerman's Elements of Botany and Analytical Flora of Kansas.

Advanced Botany.—In the winter term of the fourth year, the minute structure of plants, as well as vegetable physiology, is studied more fully. This includes an examination of the vegetable cell, its parts, modifications, and of tissue as presented in its various forms. This is made the basis for more detailed work on special subjects, among which may be mentioned germination, development of tissues, protoplasm, starch, parasitic fungi—especially the moulds, smuts, rusts, etc., and other cryptogamic plants. Each student has the use of a compound microscope with the necessary tools and reagents. While this course is intended primarily to furnish a foundation for applied botany in horticulture and agriculture, it also affords, especially when taken a second term as an elective study, the advantages of systematic observation and original investigation. A good herbarium and a large greenhouse are drawn upon for material for study.

Books of Reference.—The works of Sachs, Goebel, Vines, Gray, Lesquereux, Sullivant, Englemann, Tuckerman, Cooke, Berkeley, Darwin, De Barry, Saccardo, Walle, and others.

Chemistry.—INORGANIC CHEMISTRY, which occupies the fall term of the second year, includes a consideration of chemical action with nomenclature and formulas, and a careful study of the history, manufacture, physical, chemical and physiological properties, tests and uses of the various elements and their compounds. While teaching the facts as such, it is the aim to give prominence to those which show relations and illustrate principles. Especial attention is given to those substances having extended application in the arts. In addition to the usual lecture-room experiments, the student repeats, as far as practicable, all this experimental work at his private work-table. Text-book, Remsen's Introduction to the Study of Chemistry.

ORGANIC CHEMISTRY comprises a six-weeks course of lectures upon the preparation and properties of those organic substances most useful to man.

In CHEMICAL ANALYSIS, each student has his stand in the Qualitative Laboratory, completely furnished with apparatus and chemicals for his own use. His work includes the analysis of more or less complex mixtures of chemicals, minerals, ores, soils, mineral waters, well-waters, etc. The time given to this work is two hours daily for eleven weeks.

AGRICULTURAL CHEMISTRY.—This includes a thorough consideration of the application of chemical principles to the economy of the farm: the origin and formation of soils; the classification and composition of soils; the analysis of soils, and their adaptation to purposes of production; the composition and use of manures; composting; chemistry of farm operations — such as plowing, fallowing, draining; chemistry of plant-growth; the composition of grain and fodder plants, and their use and value as food; feeding; the chemistry of milk, butter, and cheese.

BOOKS OF REFERENCE.—Roscoe, Schorlemmer, Miller, Storer, Cooke, Allen, Strecker, Bloxam, Remsen, Frankland, Fresenius, Thorpe, Blyth, Prescott, Wanklyn, Tucker, Naquet, Paul and Payen, Wagner's Technology, Crooke's Metallurgy, Richardson and Watt's Technology, Muspratt's Chemistry, Watts's Dictionary, Sutton's Volumetric Analysis, Crooke's Select Methods, Gmelin's Hand-Book of Chemistry, Journal of the Royal Agricultural Society, Reports of Experiment Stations.

Mineralogy.—For six weeks in the second year, two hours a day are given to mineralogy. This includes the study of the properties, forms and uses of the principal minerals of the United States. Blowpipe analysis forms an important part of the course, each student being required to identify and name a large series of minerals. The pocket lens required in botany classes is used in this study. Text-book, Dana's Manual of Mineralogy and Petrography.

BOOKS OF REFERENCE.—The works of Dana, Plattner, and Elderhorst.

Geology.—This includes a general consideration of the earth's features, the constitution of rocks, and the arrangement of rock-masses; the causes or origin of events in geological history; the order of succession in the strata of the earth's crust, and of the organisms that existed, and of the changes that were going on during the formation of each stratum. Prominence is given to facts having an economic bearing. The formation of soils and deposits of valuable minerals, especially in Kansas, are considered, and an excellent collection of geological specimens furnishes illustrations. LeConte's Compend of Geology is used as a text-book.

BOOKS OF REFERENCE.—The works of Dana, LeConte, Geike, and the various geological surveys.

Anatomy and Physiology.—Human anatomy is made the basis of a thorough study in physiology and hygiene. This includes such subjects as: Digestion and food; poisons and antidotes; circulation of the blood; respiration and ventilation; secretion and excretion; the nervous system; and the special senses. The course embraces, to some extent, Comparative Anatomy and Physiology, affording preparation for the study of Stock-breeding, Zoölogy, and Veterinary Science. Martin's Human Body is used as a text-book. In connection with this study, dissecting is required.

BOOKS OF REFERENCE.—Dalton's Human Physiology, Yéo's Manual of Physiology, Flint's Physiology of Man, Gray's Anatomy, and Chauveau's Comparative Anatomy of the Domestic Animals.

Zoology.—In this study, Orton's Zoölogy has been adopted as the text-book. The intention of the course is to familiarize the student with the characters of some type in each class, and then, by comparative study, with the chief modifications of the type chosen. Especial attention is given to comparative anatomy and physiology. A good collection of animals, birds, reptiles, fishes, both mounted and alcoholic, a collection of invertebrates in alcohol, and a fine collection of conchological specimens, are among the means of illustration. Dissection and work with the microscope accompany the study.

BOOKS OF REFERENCE.—A selection of standard works, including those of Agassiz, Huxley, Gegenbaur, Balfour, Foster, Darwin, Wallace, Frey, Packard, Coues, Baird, Jordan, Haeckel, and others.

Veterinary Science.—The twelve-weeks course of lectures is adapted to wants of farmers and stockmen, and includes such topics as the following: Diseases of bone and their treatment; diseases of the circulatory, respiratory, and digestive systems, their causes, treatment, and prevention; surgical operations, wounds and abscesses, difficult parturition; shoeing and lameness; veterinary dentistry; horse-judging and examination for soundness; the principal medicines used in treating sick animals, and how to give them.

Lectures are illustrated by use of animals, skeletons, charts, and diseased specimens. Whenever practicable, operations are performed before the class, and students are requested to assist.

Books of Reference.—The works of Williams, Low, Flemming, Smith, Dunn, Steele, and Robertson.

Special Hygiene.—To young women of the third year a course of daily lectures is given upon the laws of life and health. The course extends over a period of ten weeks, and covers questions pertaining to personal health, and the health of the household — such as food, air, exercise, clothing, temperature of rooms, and care of sick-room.

Books of Reference.—Health and its Condition (Hinton), Dictionary of Hygiene (Blyth and Tardien), Hygiene and Public Health (Buck).

Household Economy.—A series of lectures to young women of the second year continues through a term of twelve weeks. These cover the subjects of marketing, the chemistry of cooking, order, neatness, and beauty in housekeeping, and comfort of a family. The class spends one hour each day in the kitchen laboratory, and cooking is done by each student.

Books of Reference.—The writings of Dr. Pavy, Mrs. Lincoln, W. M. Williams, E. and F. N. Spon, H. Letheby, Miss Acton, Miss Parloa, and Miss Youmans.

Physics and Meteorology.—Two terms' work gives an opportunity for experimental study of the laws of sound, heat, light, electricity, and magnetism; the constitution of the atmosphere; the measurement of temperature and humidity; atmospheric pressure. Text-book, Atkinson's Ganot's Physics. This course also includes a careful study of instruments and methods employed in taking meteorological observations.

Books of Reference.—The works of Deschanel, Tyndall, Faraday, Helmholtz, Grove, Gordon, Thompson, Stewart, Siemans, Maxwell, Miller, Pickering, and Kohlraush.

Book-keeping and Commercial Law.—Beginning with a simple cash account, Book-keeping is developed through all the principles of single- and double-entry. Considerable time is given to those forms best adapted to farm and business life. Each student provides a full set of blanks, and keeps a regular set of books, in which accuracy of calculation and posting, and neatness of execution, are just as essential as correct understanding of the principles. Text-book, Mayhew's Standard Book-keeping.

In connection with the term's work in book-keeping, a practical course in Commercial Law is given, including contracts, farm rights, negotiable paper, sales, real estate, partnership, bailment, common carriers, and business forms.

Books of Reference.—Mayhew, Duff, and Bryant, Haigh's Manual of Farm Law, Townsend's Commercial Law.

Algebra.—One year is given to the study of Algebra. In the first term, arithmetical processes are briefly reviewed and generalized by the use of negative numbers. The student is made familiar with algebraic notation, the primary processes, factoring, fractions, and the simple equation. In the second term, the equation in its various forms and applications, and the theory of exponents, are made the subjects for study. The third term is given to ratio, proportion, series, logarithms, and such other topics as are essential to success in every course in mathematics. Text-book, Wentworth's Academic Algebra.

Geometry.—In geometrical drawing of the first year, the student has already become familiar with geometrical forms, and the construction of figures representing them. Plane geometry is studied during the fall term of the second year. Half the winter term is then given to solid and spherical geometry. Throughout the course original demonstrations, and the solution of practical problems involving the theorems demonstrated, are required of the class. Text-book, Wentworth's Plane and Solid Geometry.

Trigonometry and Surveying.—All the essential principles of plane trigonometry are carefully developed and thoroughly mastered. A short treatment of spherical trigonometry follows. Surveying includes: theory, adjustment and use of instruments, platting, determination of areas, dividing land, U. S. Government surveys, triangulation, leveling, topographical surveying, and railroad surveying. Field practice with compass, transit, plane table, and Y level, is required. A topographical map, the data for which are gathered during the fall term, is drawn by each student during the winter term. Text-book, Wentworth's Trigonometry and Surveying.

BOOKS OF REFERENCE.—Carhart's Plane Surveying, Johnson's Theory and Practice of Surveying, Gillespie's Land Surveying, and Higher Surveying, Reports of the Coast and Geodetic Surveys.

Mechanics and Engineering.—A careful consideration of the laws of motion and force, as exhibited in machines and various phenomena of nature, occupies a single term. Another term is given to lectures in elementary, mechanical and civil engineering, and to the study of proper materials for buildings, their construction and durability; forms of roofs and bridges; care and use of machinery, and roads and road-making. Drafting is an essential feature of the work. Peck's Mechanics is used as the text-book in the first term. Haswell's Engineer's Handbook is used in connection with lectures in Engineering.

BOOKS OF REFERENCE.—Rankine's Mechanics, Weisbach's Mechanics, Hand-books of Engineering, Knight's Mechanical Dictionary, Thurston's Materials of Engineering.

Drawing.—This study is required in four terms, of which two are in the first, one in the second, and one in the third year.

First Term.—Daily lessons for fourteen weeks. Definition and mensuration of geometrical magnitudes, construction of perpendiculars, parallels, angles, and polygons, the circle and its secant lines, the ellipse, the ovoid, the oval, the parabola, the hyperbola, and various geometrical ornaments; use of drawing-board, T-square, and water-colors; conventional representation of building materials. Prof. Morse's first two books on Mechanical Drawing are used as text-books. The College furnishes drawing-board, T-square, triangle, and water-colors, but each student is required to have a drawing-pen and a pair of compasses with attachments.

Second Term.—Free-hand Drawing three hours a week for twelve weeks. The first half of the term is devoted to the study of principles of, and practice in, surface designing, after which drawing from the object is taken up. The models used are geometrical solids, and objects of utility and beauty whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations, and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow, and the reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish. Lectures on color, principles of design, and history of ornamentation are occasionally given.

Third Term.—Mechanical Drawing, six weeks. Orthographic and oblique projection of the straight line and the circle; intersection of geometrical solids; construction and development of helices. Principles of isometrical projection. Principles of shades and shadows. Books 3 and 4 of Morse's Mechanical Drawing are used as text-books.

Fourth Term.—Mechanical Drawing four times a week for ten weeks. Half of this time is given to architectural and machine drafting, and half to the study of linear perspective, comprising principles of parallel, angular and oblique perspective; the perspectives of vertical and horizontal cylinders, cylindric perspective, and perspective corrections; intersections of curved and plain surfaces in perspective; shadows in perspective; shaded perspectives. Books 5 and 6 of Morse's Mechanical Drawing are used as text-books.

During the winter term of the third year, each student is required to draw, color, ink and letter a map delineating the surveys made during the fall term.

Students who show special aptitude are encouraged to take drawing as a fourth study during any part of the course, and given every opportunity to fit themselves for the drafting office or for special art schools. The instruction includes an extended course in free-hand drawing, shading, coloring, architectural and mechanical drawing, supplemented by a course of reading on art topics.

The graphic work of the different classes and special students is retained by the department for exhibition during Commencement, after which it is returned.

Books of Reference.—Warren's Descriptive Geometry, Walter Smith's Manuals of Art Education, Ware's Perspective, Andre's Hand-

Book of Topographical Drawing, Davies's Shades and Shadows, Gwilt's Cyclopedia of Architecture, Prang's Art Atlas, Lübke's History of Art, Steinhauser's Room Decoration, Van Bezoldt's Theory of Color, Winkelman's History of Ancient Art, and several volumes of the writings of Viollet Le Duc.

English Language and Literature.—Grammar is passed upon entrance, but the fall term of the first year is given to study of the origin and growth of the language, the analysis of sentence-making, and the discussion of idioms, difficult constructions, and parallel expressions, together with such contraction, transposition, and transformation of sentences as will aid in securing variety in expression. The course will be essentially one of higher analysis. The winter term is given to the study and practice of composition. The spring term is given to English Structure. Under this is included a careful study of words and their elements — roots, prefixes, and suffixes. The most fruitful primitives from the Saxon, Latin, and Greek are learned, and also the laws governing the formation of derivatives. Lectures are given on the history and changes of words, and daily exercises are intended to teach careful discrimination in their use.

Third Year.—One term is given to the study of Higher Rhetoric, embracing the principles of clear explanation and convincing argument, as well as the outlines of sound criticism. This is followed by a term spent in the history of the English language and literature, with abundant illustrations from the best authors.

Students are led in this way to appreciate the power of our mother tongue, and at the same time to gain some acquaintance with the best thoughts of the world. Students are encouraged and directed in the use of the College Library, and are under constant oversight in the expression of their thoughts in writing. Each class meets once a week for instruction and practice in elocution and composition. Original declamations, delivered before the students and Faculty, make a part of the drill in the higher classes.

In the course for young women, the first term of the fourth year gives training in the elements of criticism and good taste by a critical study of famous works in English and American literature.

TEXT-BOOKS.—Swinton's Word Analysis, Welsh's Composition, Hill's Principles of Rhetoric, Kellogg's English Literature.

BOOKS OF REFERENCE.—Various English grammars and rhetorics, several histories, manuals, and dictionaries of literature, Marsh's Lectures, Whitney's Life and Growth of Language, DeVere's Studies in English, French's works, Baldwin's, Morley's, and Müller's works, Duychink's Cyclopedia of American Literature, Stedman's Library of American Literature, Chambers's Cyclopedia of English Literature, Alden's Cyclopedia of Universal Literature, English Men of Letters, and many works of standard literature.

History and Constitutional Law.—General History is studied during the fall term of the third year. The text-book, Sheldon's Studies in General History, is supplemented by lectures on the progress of civilization, and the philosophy of history. Considerable attention is given to the various forms of government. The chief object of the course is to teach the student how to study history, and he is constantly urged, therefore, to form his own conclusions from the facts presented.

The winter term of the third year is given to Constitutional History and Civil Government. Every effort is made to avoid partisanship, and the students are encouraged to express their opinions freely. Johnston's "The United States" and Fiske's Civil Government are used as text-books, but considerable additional matter is given in lectures and much individual work required.

Books of Reference.—The works of Bancroft, Winsor, McMaster, Von Holst, Bryce, Cooley, Woolsey, Lenormant and Chevalier, Rawlinson, Mommsen, Grote, Green, Guizot, Buckle, Draper, and others.

Political Economy.—The study of Political Economy, in a full term of the fourth year, gives a fair presentation of subjects connected with production, distribution, and consumption of wealth. While the instruction is given by lectures, each student is expected to provide himself with some standard text-book for daily reference. Pains is taken to compare conflicting views, and point out sources of information on all sides of vexed questions, without bias or prejudice. Each student is required to present at some time during the term an original paper upon some topic assigned by the instructor.

Books of Reference.—The works of Adam Smith, Mill, Fawcett, Cairnes, Walker, Bowen, Carey, Thompson, Roscher, and many others.

Logic and Philosophy.—The art of reasoning correctly is aided by a study of systematic logic, both deductive and inductive. Special prominence is given to methods for exact observation and experiment, and correct principles of classification. The previous researches and experience of the students are made to illustrate these principles. Text-book, Jevons-Hill, Elements of Logic.

A short course in Psychology gives the general principles of intellectual and moral philosophy. Perception, understanding, memory, imagination, thought, feeling, and volition, are topics of explanation and analysis. Theories of right and wrong, and correct principles of action, are made the means of a clear understanding of the nature of government in various forms, with special attention to individual rights and duties. Hopkins's Outline Study of Man forms the basis of the course.

Books of Reference.—Mill's, Jevons's and Fowler's Logic, Bascom's Psychology, Porter's Human Intellect, Fairchild's Moral Philosophy, Cousin's "The True, the Beautiful, and the Good," and the works of Spencer, Hamilton, and others.

Industrial Arts.—The training in these departments is designed to be systematic and complete in each, so that the student, following a single line diligently through the four-years course, gains the essentials of a trade and a reasonable degree of skill. Those who wish only a general acquaintance with the arts can take shorter courses in several of them; but all are to select with a definite purpose. In the established course, young men are required to take the regular term in the carpenter shop, and on the farm and gardens, whatever the industrial chosen; young women are required to give one term to sewing, one to practice in the kitchen laboratory, and one in the dairy.

AGRICULTURE AND HORTICULTURE are required of young men as industrials during one term of the second year and one term of the third year. In these, practice is made to illustrate and emphasize the teaching, and cover essentially the same ground.

COOKING.—During the winter term, the young women who have lectures on Household Economy are required to cook one hour each day. They are taught various methods of making the substantial articles of food, as well as allowed to spend some time on the dainty dishes. During the term, they have practice in waiting on the table, in serving guests, and in arranging for evening companies, thus putting into immediate practice the lectures of each day.

During the fall term, any students who have passed the study of Household Economy may take cooking as an industrial, in which canning fruits, making preserves, jellies, pickles, mince-meat, desserts, cake and fancy breads form the principal part of the work.

DAIRYING.—During the spring term, daily instruction and practice in domestic dairying are given the young women of the second year by the Instructor in Household Economy. Here the regular daily work is supplemented by a short course of lectures intended to explain the best practice in the arts of butter- and cheese-making, and to give the reasons therefor. The following topics cover, in the main, the instruction given the class: Influences affecting the quality and quantity of milk; butter-making; creameries; "deep" and "shallow" setting systems; packing and preserving butter; the household and factory systems of cheese-making.

CARPENTRY.—Wood-work is required of all young men during one term of the first year. In the first term's work a definite graded series of tasks is given in joining, work to dimensions, and simple problems in construction and turning, with the proper use and care of common bench tools, through which each student is advanced according to ability. Practice is given later in general wood-work, carpentry, cabinet-making, turning, and pattern-making; and the advanced students may have work suited to their chosen line, with special problems of construction, and special training in the use and care of fine tools, including saw-filing. All work during industrial hours is laid out by the Superintendent, and belongs to the shop, except that fourth-year students are allowed to work from drawings of their own upon articles for their own use or profit. All students may be allowed the use of the shop outside of the practice hours for work of their own, under direction of the Superintendent.

In iron-work, instruction is given in ordinary work — forging, filing, tempering, etc.

Sewing.—One term of sewing is required before the completion of the first year of study. During this term the work is carefully laid out by the Superintendent in a series of lessons, graded to the capabilities of each student. To more advanced students all ordinary forms of sewing with needle and machine are taught, and any student may furnish material, and work for her own advantage under direction of the Superintendent. Cutting and fitting by a straight-line system are taught, and the systems are furnished at wholesale rates. Fancy needlework and knitting may be taken at certain stages of the course.

Printing.—Two courses are pursued in this art. In one the student is taught the use of the implements or tools used in typography; composition and imposition; correcting proof; technical terms; presses and their workings; and the general duties of a first-class workman. The other course of lessons embraces instruction in spelling, capitalization, syllabication, punctuation, proof-reading, and such other work as will make the student accurate and expert. Wilson's Punctuation is the text-book; but much of the instruction is oral — such as grows out of the every-day experience of the office.

Admirable drill is furnished by the *Industrialist* to all, but especially to those who take the full course. The printing which the departments of the College require gives to the advanced student a fair knowledge of the principles and practice of job-work.

Books of Reference.—MacKellar's American Printer, Harpel's Typograph, Ringwalt's Encyclopedia of Printing, DeVinne's The Invention of Printing, DeVinne's Printers' Price List, the *Inland Printer*, *American Art Printer*, *Superior Printer*, *Paper and Press*, *The American Bookmaker*.

Instrumental Music.—Provision is made for giving instruction upon the piano, organ, orchestral and band instruments. A full course upon the organ or piano extends over four years, including harmony and composition; but the students may take lessons for a single term if they choose. The College furnishes the pianos and organs for daily practice, but the instruction is paid for at the usual rate, as given under "Expenses." Music may be the industrial for young women, unless some other is required in the course. Young men may take music in addition to their course, if able to keep up standing in classes.

Opportunity is given for students who are sufficiently advanced, to join in the weekly rehearsals of the College Orchestra on Wednesday, and the Cadet Band on Friday.

Text-books.—Plaidy's Technical Studies, Czerny, Duvernoy, Loeschorn; Recreations for Piano and Organ; selections from Haydn, Mozart, Beethoven, and others; Arban's School for Cornet, Cuisinus, White, Wichti's Violinist, De Beriot, and the recognized school for any instrument not included in the above; Marx's Harmony and Composition, Elementary Charts, Berloiz's Instrumentation.

Vocal Music.—All students are furnished instruction in vocal music free of charge, under the direction of the Faculty. Classes meet on Mondays and Wednesdays for advanced pupils, and for beginners on Tuesdays and Thursdays, at 1:30 P.M. The advanced class shares in the music of public exercises during the Commencement week. This study is taken up at the choice of the student, but regular attendance is required as at other classes until excuse is granted.

Arrangements for special voice culture may be made with the Professor in charge, on reasonable terms.

Text-books.—Scansion and Song, Brown's Prismatic Charts, Hatton, Concone, Marchesi, with selections from the opera and oratorio.

Military Training.—During the second year, a course of thirty-two lectures is given. These are designed to show how an army is organized, equipped and supplied, to explain some of the minor operations of war, to show the organization of the militia under the militia law of this State. Instruction is afforded, to such as desire it, in other military subjects.

To all who desire it, an opportunity is given for practice in the ordinary infantry drills, including the school of the soldier, company and battalion, and target practice, and in artillery (foot battery) drill. Although drill is thus made optional, students are not allowed to take it for periods shorter than one term. To obtain a proper proficiency, however, one should take the semi-weekly drill for at least a year.

The college battalion is divided into companies, which are officered by students appointed each term by the Professor in charge, with the approval of the President.

Arms and accoutrements are furnished by the United States Government, the students being required to keep such as they use in proper condition. Uniforms for use in drill are furnished by the College.

EXAMINATIONS.

Examinations for admission are held at the beginning of each term, as laid down in the calendar of the College year. Applicants, to enter at any time during the term, shall have special examinations. These examinations are chiefly written, and a standing of 70 per cent. is required to pass any study.

Examinations in the course are held as arranged by the Faculty. The results of these examinations are marked on a scale of 100, and combined with the average of the preceding daily exercise upon the same scale into a grade for report to the Secretary. But any student not present at three-fourths, at least, of the class exercises, receives, at such time as the teacher may name, a more extensive examination than the general one; and this examination alone decides the grade.

Averages of grades in the register are made by giving the final term grade a value of two-thirds and previous grades a value of one-third. After each term examination during the first year of attendance, a report of advancement is made to parents; and any student, upon leaving College at the close of a term, may receive a certificate of standing.

The final grade and the term average must be at least 70 for passing any study; and any student who fails to pass in two studies of the course may drop back a year or withdraw from College.

After completing the studies of the first year, students are allowed special examination only upon recommendation of the Professor in charge, and by permission of the Faculty. Permission for examination in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the Professor in charge, and are thorough and exhaustive.

MEANS OF ILLUSTRATION.

Agriculture.—One hundred and eighty-five acres of land used for farm purposes, with hundreds of plots under experiment in grain, grasses, and forage crops; and illustrating various methods of culture and rotation.

A barn 50 by 75 feet, expressly arranged for experimental uses; and connected with it a general-purpose barn, 48 by 96 feet, for grain, hay, horses, and cattle. Both buildings are of stone, and are provided with steam power and equipped with improved machinery for shelling, grinding, threshing, cutting for the silo, and steaming.

Two piggeries, one of ten pens for experimental uses, and one of six pens, with separate yards, for general purposes.

An implement house 22 by 50 feet, of two stories, and corn-cribs.

Shorthorn, Aberdeen-Angus, Hereford, and Jersey cattle; Berkshire and Poland-China swine.

Farm implements of improved patterns.

Collections of grains, grasses, and forage plants.

Buildings, stock and equipments are valued at $26,000.

Horticulture and Entomology.—Orchards containing 200 varieties of apples, 30 of peaches, 30 of pears, 20 of plums, 30 of cherries, and 5 of apricots.

Small-fruit garden, with 200 varieties of small fruit, including blackberries, raspberries, gooseberries, currants, and strawberries; and vineyard, with 100 varieties of grapes.

Forest plantation of twelve acres, containing twenty varieties of from one to twenty years' growth.

Ornamental grounds, set with a variety of evergreens and deciduous trees. Sample rows, containing about 150 varieties of ornamental and useful shrubs and trees, labeled.

Vegetable garden, with hot-beds and cold-frames, and experimental beds. Practice rows for students' budding, grafting, cultivating, and pruning.

Two well-planned and furnished green-houses of three rooms each, stocked with a collection of native and exotic plants.

Museum, containing a collection of woods from American forests, and a large series of specimens in economic and general entomology.

Value of property, exclusive of orchards and grounds, $13,000.

Chemistry and Mineralogy.—Eight rooms, fitted with tables and apparatus for a class of eighty students in qualitative analysis, sixteen in quantitative analysis, including necessary facilities for assaying, with a mineralogical collection and general illustrative apparatus. Value, exclusive of building, $8,000.

Botany.—A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the State; also twenty-eight compound microscopes, four dissecting microscopes, tools, reagents, wall-charts, etc. Valued at $3,000.

Geology, Zoölogy, and Veterinary Science.—A general museum well fitted with cases containing valuable collections of mounted Kansas mammals and birds, with mounted skeletons of wild and domestic animals. The largest collection of Kansas fishes and mollusks in the State. Kansas reptiles and batrachians, salt-water fishes and invertebrates in alcohol. Collections of Mound-builders' and Indian relics. Kansas fossils and rocks, typical of the geological ages found in the State.

In Veterinary Science: A laboratory fitted with apparatus and reagents, for the study of disease. A collection of charts, models, and anatomical preparations, illustrating healthy and diseased structure. Value, including general museum, $4,500.

Drawing.—Models, plaster-casts, patterns, charts, easels, and implements. Valued at $1,400.

Physics.—Physical apparatus, meteorological instruments, etc. Edelman's dynamo electric machine, Thompson's potential galvanometer, Coulomb's torsion balance, with numerous accessories, sling psychrometer, and anemometer. The value of the whole is $4,000.

Mathematics and Surveying.—Transits, plane-table, compasses, levels, chains, models, etc. Valued at $1,250.

Mechanics and Engineering.—Carpenter shop, with separate benches and tools for forty-five students in each class, besides lathes, mortising machine, circular saws, band saws, planer, friezer, boring machine, grinder, and general chest of tools for fine work. Power furnished by a ten-horse-power Atlas engine.

Shops for iron work, with forges, vises, drills, lathes, etc. Testing machine, charts, and models.

Inventory of material and apparatus in both shops, $8,300.

Kitchen Laboratory, with ranges, cooking utensils, dining-room furnishings, dairy furniture. Valued at $600.

Printing.—Office with thirty pairs of cases, large fonts of six-point, eight-point, ten-point, and eleven-point Roman type; a good assortment of job type and brass rule; a Babcock cylinder press with steam power, a new Liberty quarto-medium job press, a Gordon eighth-medium job press; a mitering machine, a rule-curving machine, and a paper cutter. Value of equipment, $4,300.

Sewing Rooms, with seven machines, models, patterns, and cases; worth, $600.

Music Rooms, with four pianos, four organs, and other instruments; valued at $2,000.

A Library, carefully selected and catalogued, containing over 11,000 bound volumes, and 3,000 pamphlets. A reading-room is maintained in connection with the library, where may be found on file forty-five of the leading literary, scientific, technical, and agricultural periodicals, and several hundred newspapers, including the principal daily and weekly papers from all parts of the State. Value of Library, $20,000.

Armory, containing one hundred and fifty stands of arms (breech-loading cadet rifles, caliber .45), with accoutrements; two three-inch rifled guns; also swords, uniforms, etc. Value, exclusive of arms, $1,000.

GROUNDS AND BUILDINGS.

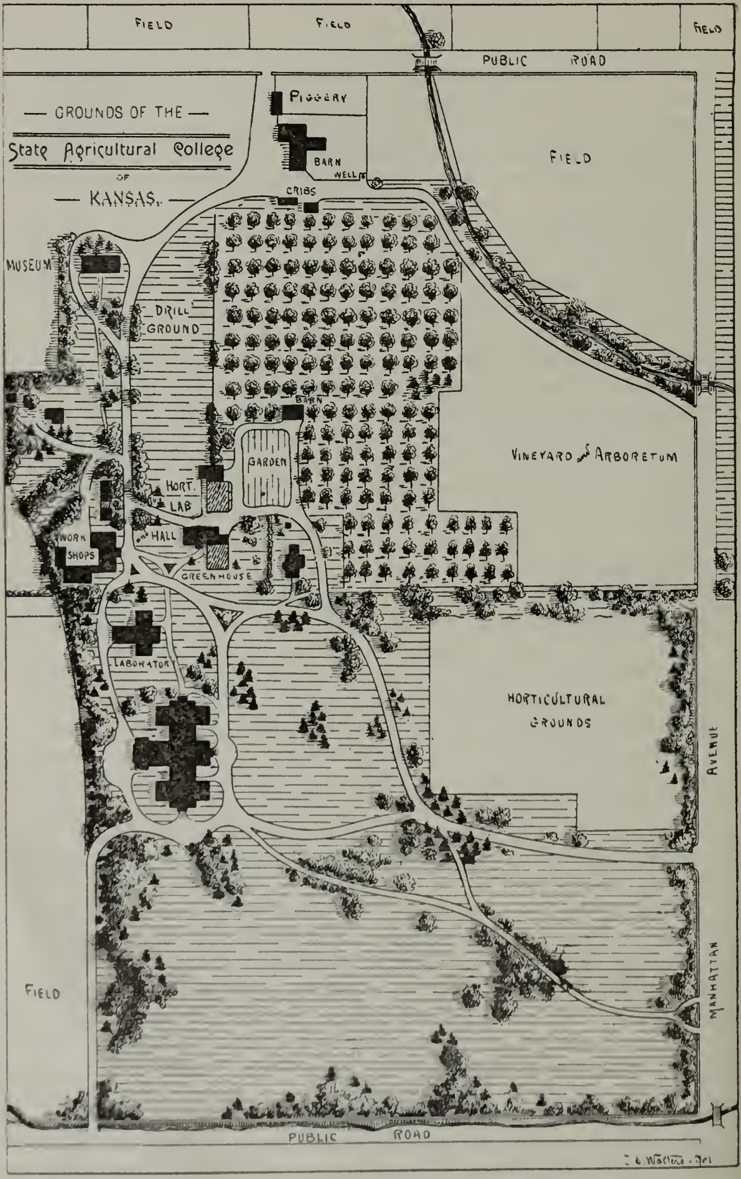
The College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing towards the city, are beautiful in location. The grounds include an irregular plot in the midst of a fine farm, with orchard, vineyard, and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted according to the design of a professional landscape gardener, while well-graveled drives and good walks lead to the various buildings. All of these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and all are heated by steam or hot water. The buildings stand as indicated in the plot accompanying the following description:

College, 152 by 250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices, reception room, cloak-rooms, studies, chapel, library, reading-room, kitchen laboratory and dairy, sewing-room, society-rooms, telegraph office, and twelve class-rooms.

Chemical Laboratory, one story, 26 by 90 and 46 by 75 feet of floor space, in form of a cross. It contains eight rooms, occupied by the Department of Chemistry and Mineralogy.

Mechanics' Hall, 39 by 103 feet, two stories, and 40 by 80 feet, one story, occupied by Wood and Iron Shops, Printing Office, and Music Rooms.

Horticultural Hall, 32 by 80 feet, one story and cellar, having cabinet-room, class-room, and storage, with green-house attached.


— GROUNDS OF THE —
State Agricultural College
OF
— KANSAS. —
FIELD
FIELD
FIELD
PUBLIC ROAD
PIGGERY
BARN
WELL
CRIBS
FIELD
MUSEUM
DRILL GROUND
BARN
GARDEN
VINEYARD AND ARBORETUM
HORT. LAB
HALL
WORK SHOPS
GREENHOUSE
LABORATORY
HORTICULTURAL GROUNDS
MANHATTAN AVENUE
FIELD
PUBLIC ROAD
J. D. Walters . Del

Horticultural and Entomological Laboratory, with propagating houses attached.

Two stone dwellings, occupied by the President and the Professor of Agriculture.

Museum Building, 46 by 96 feet, and two stories. This building, which has served many purposes, is now fitted for an armory, drill-room and Veterinary laboratory below, and for class-room and laboratory for Department of Botany and Museum of Natural History above.

The Farm Barn is a double but connected stone structure, 50 by 75 feet and 48 by 96 feet, with an addition of sheds and experimental pens 40 by 50 feet. A basement, having stables for seventy-five head of cattle, silos, engine-room, and granaries, underlies the entire structure.

The Horticultural Barn is a stone building, containing store-room, granary, and stables for several horses.

The blacksmith shop, lumber house, implement house, piggery and various out-buildings are of wood.

TERMS OF ADMISSION.

Applicants for admission at the beginning of the College year must be at least fourteen years of age, and able to pass a satisfactory examination in reading, spelling, writing, arithmetic, geography, English grammar, and United States History. Those applying later in the year must show sufficient advancement to enter the classes already in progress. Every effort should be made to begin with the first day of a term, in order to advance with the classes from the first.

The following diplomas and certificates will be received in lieu of entrance examinations:

1st. Diplomas received on the completion of a county course of study which has been approved by the Faculty, when properly signed by the county superintendent.

2d. Certificates of passing the grammar grade in any city school with a course of study approved by the Faculty, when properly signed by the city superintendent.

3d. Kansas teachers' certificates issued by the county board of examiners, showing that the above-named studies have been passed with a grade of at least 70 per cent.

The Faculty have approved of the following courses of study, but others may be submitted for approval at any time:

Allen,
Anderson,
Barber,
Brown,
Bourbon,
Butler,
Chase,
Cherokee,
Clay,
Cloud
Cowley,
Dickinson,
Doniphan,
Elk,
Ellis,
Geary,
Greenwood,
Harper,
Harvey,
Jackson,
Jefferson,
Jewell,
Johnson,
Kingman,
Leavenworth,
Linn,
Marshall,
Marion,
McPherson,
Mitchell,
Montgomery,
Nemaha,
Neosho,
Osage,
Osborne,
Ottawa,
Republic,
Reno,
Rice,
Riley,
Rooks,
Rush,
Russell,
Shawnee,
Sumner,
Wabaunsee,
Washington,
Wilson,
Woodson,
Wyandotte.

CITIES.

Abilene,
Anthony,
Arkansas City,
Atchison,
Augusta,
Beloit,
Burlington,
Caldwell,
Chanute,
Cherryvale,
Chetopa,
Clay Center,
Clifton,
Coffeyville,
Concordia,
El Dorado,
Emporia,
Eureka,
Fort Scott,
Girard,
Great Bend,
Hiawatha,
Holton,
Horton,
Hutchinson,
Independence,
Junction City,
Kanopolis,
Kansas City,
Kingman,
Larned,
Lawrence,
Leavenworth,
Lyons,
Manhattan,
McPherson,
Minneapolis,
Newton,
Olathe,
Osage City,
Osborne,
Oswego,
Ottawa,
Paola,
Parsons,
Salina,
Seneca,
Solomon City,
Topeka,
Washington,
Wellington,
Winfield,
Wichita.

Applicants of mature age who, for lack of advantages, are unable to pass the full examination, may be received on special conditions.

Applicants for advanced standing in the course must pass examination in all the previous studies of the class to be entered; but, if they have pursued such studies in other institutions of similar rank, they may receive credit for their standing in those institutions upon presenting a certificate from the proper officer, showing that their course has been equivalent to that given here.

The questions on pp. 46–48 may serve as samples of the examinations for admission.

GRAMMAR.

1. Define grammar, analysis, parts of speech, parsing.
2. Name and define the elements of the sentence.
3. Classify sentences, and write a sentence of each class.
4. Define infinitives, participles. Give an example of each.
5. What is an adjective clause? An adverb clause? A noun clause? Show by sentences the use of each.
6. Give the subdivisions and the modifications, or properties, of the pronoun.
7. Name and illustrate the constructions in which a noun is in the nominative case. In the objective case.
8. Explain agreement of the verb, and give sentences to illustrate.
9. Analyze or diagram: "When I reflect upon the influence of a mother, of a pure, educated, Christian woman, I no longer doubt."
10. Parse italicised words:

> "*Burned Marmion's swarthy cheek* like fire,
> *And* shook *his* very *frame* for *ire*."

ARITHMETIC.

1. Find the L. C. M. and G. C. D. of 724 and 896.

2. Find the cost of 8,462 lbs. of hay, at $9.50 a ton.

3. A field containing 18 acres is 80 rods long. Find the cost of fencing it at $1.25 a rod.

4. A merchant sells a wagon for $161, and gains 15 per cent. How much did he gain?

5. If copper is mixed with 20 per cent. of its weight of nickel, what per cent. of the mixture is nickel?

6. Find the interest on $960 from March 5, 1882, to September 25, 1888, at 7 per cent.

7. Which is the better, to buy flour at $8 per barrel, on 6 months' credit, or at $7.50, cash, money being worth 6 per cent.?

8. Which is the better investment, 5-per-cent. stock at 75, or 6-per-cent. stock at 80?

9. Find the cube root of .75 to three figures.

10. What will be the cost of a 90-day draft for $5,000, if exchange is ¼ per cent. discount, and money worth 6 per cent.?

GEOGRAPHY.

1. What is latitude? Longitude? A prime meridian? Explain the cause of winter and summer.

2. Name the grand divisions of the earth, and after each write the name of its principal mountain system and largest river.

3. Name and locate five lakes, five gulfs or bays, five rivers, of North America.

4. Draw a map of your native State, showing rivers, railroads, and important cities. What are its chief products?

5. Name, in their order, the States that border on the Atlantic Ocean, and give the capital of each.

6. What kind of a government has Mexico? Who are its people? What are its exports?

7. Locate the countries of South America. Give the principal exports of Argentine Republic, Brazil, and the West Indies.

8. Name eight countries of Europe, and give their capitals and forms of government. What causes the great emigration from Europe to America?

9. Bound India, the Chinese Empire, and Japan. Locate Egypt and Madagascar.

10. Trace the course of a vessel around the world, starting from New York and touching at five great ports.

UNITED STATES HISTORY.

1. Give a brief account of the first settlements in Virginia, New York, and Pennsylvania.

2. Name the wars in which colonies were engaged, and state briefly the cause and result of each.

3. (*a*) Describe three battles of the Revolutionary war. (*b*) What aid did France give to the United States during that war?

4. (*a*) Give the chief defects of the Articles of Confederation. (*b*) Give a history of the making of the Constitution.

5. Causes of the war of 1812? Describe Perry's battle on Lake Erie, and Jackson's battle of New Orleans.

6. Causes of the Mexican war? Date and terms of Treaty of Peace with Mexico.

7. Chief events of Jefferson's, Monroe's, and Buchanan's administration.

8. Name, describe, and give consequences of one battle in each year of the Civil War.

9. Give date of five important inventions, and state some of the effects of each.

10. Name five important events since the Civil War, and state why you consider each important.

GENERAL DUTIES AND PRIVILEGES.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character, by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week-day except Saturdays, and no student may be absent without excuse. Students enrolled in any term cannot honorably leave the College before the close of the term, unless excused beforehand by the Faculty. A full and permanent record of attendance, scholarship, and deportment shows to each student his standing in the College.

Chapel exercises occupy fifteen minutes before the meeting of classes each morning, and unnecessary absence from them is noted. On Sunday no services are held in the chapel, but students are urgently advised to attend the different churches of the city.

Every Friday, at 1:30 P. M., the whole body of students gather for a lecture from some member of the Faculty, or for the rhetorical exercises of the third- and fourth-year classes. Once a week all the classes meet, in their class-rooms, for exercises in elocution and correct expression.

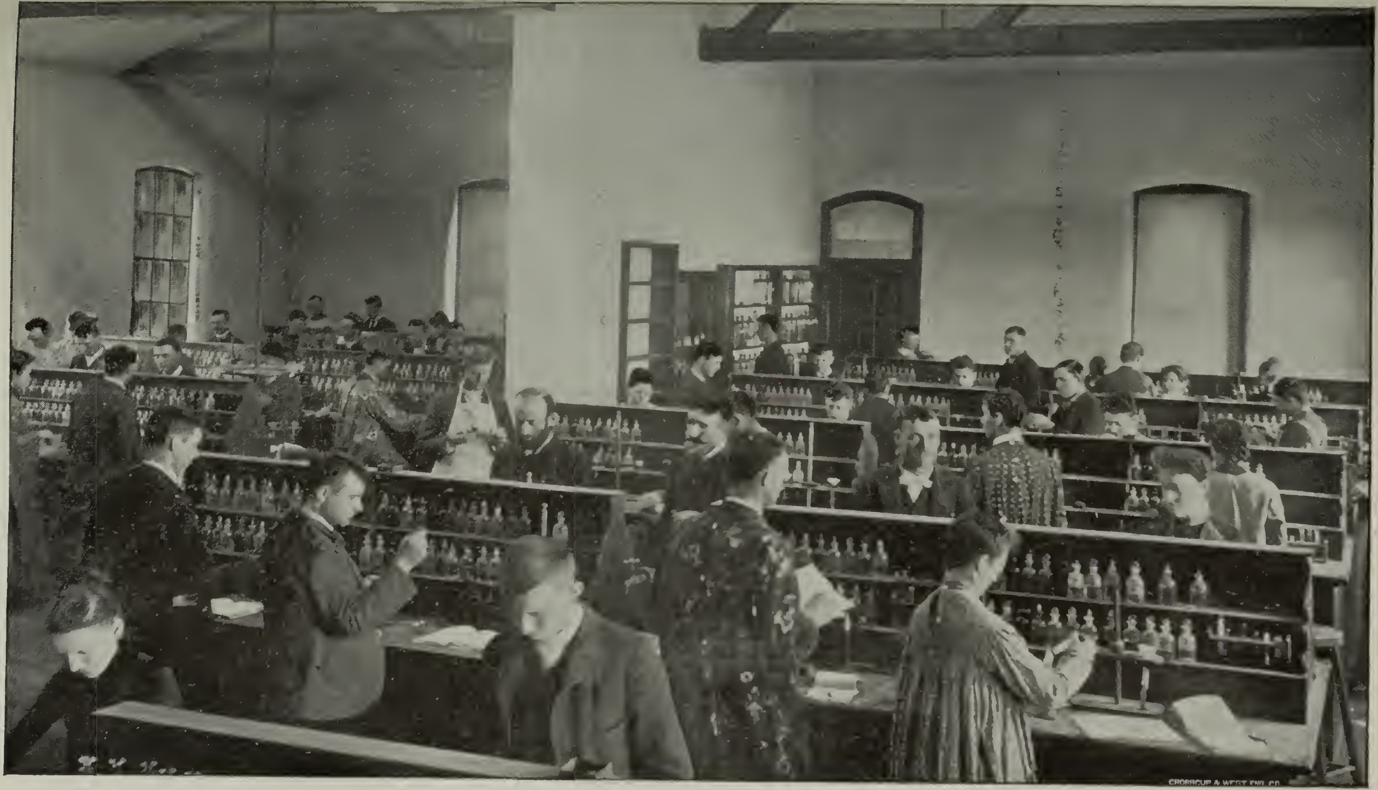
There are four prosperous literary societies which meet weekly, in rooms set apart for their use. The *Alpha Beta*, open to both sexes, and the *Ionian*, for ladies, meet Friday afternoon. The *Webster* and the *Hamilton* admit to membership gentlemen only; and meet on Saturday evening.

The Scientific Club, composed of members of the Faculty and students, meets in the Chemical Laboratory on the fourth Friday evening of each month.

Branches of the College Y.M.C.A. and Y.W.C.A. hold weekly meetings at the College, and a union meeting on the first Friday evening of each month.

Once in each term the College Hall is opened for a social gathering of Faculty and students, in which music, literary exercises, and friendly greeting find place.

Public lectures by prominent men of the State are provided from time to time, as opportunity offers. All are free.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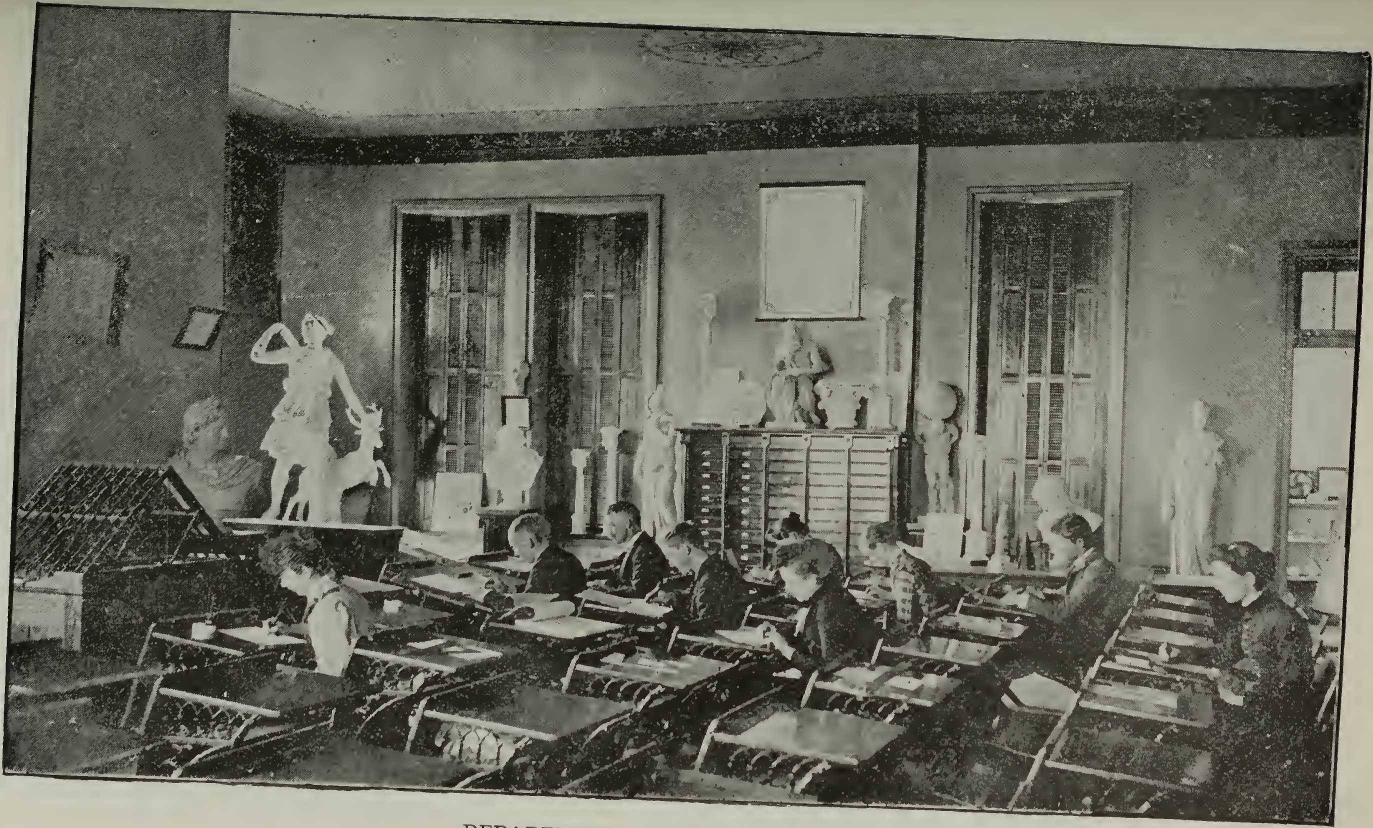
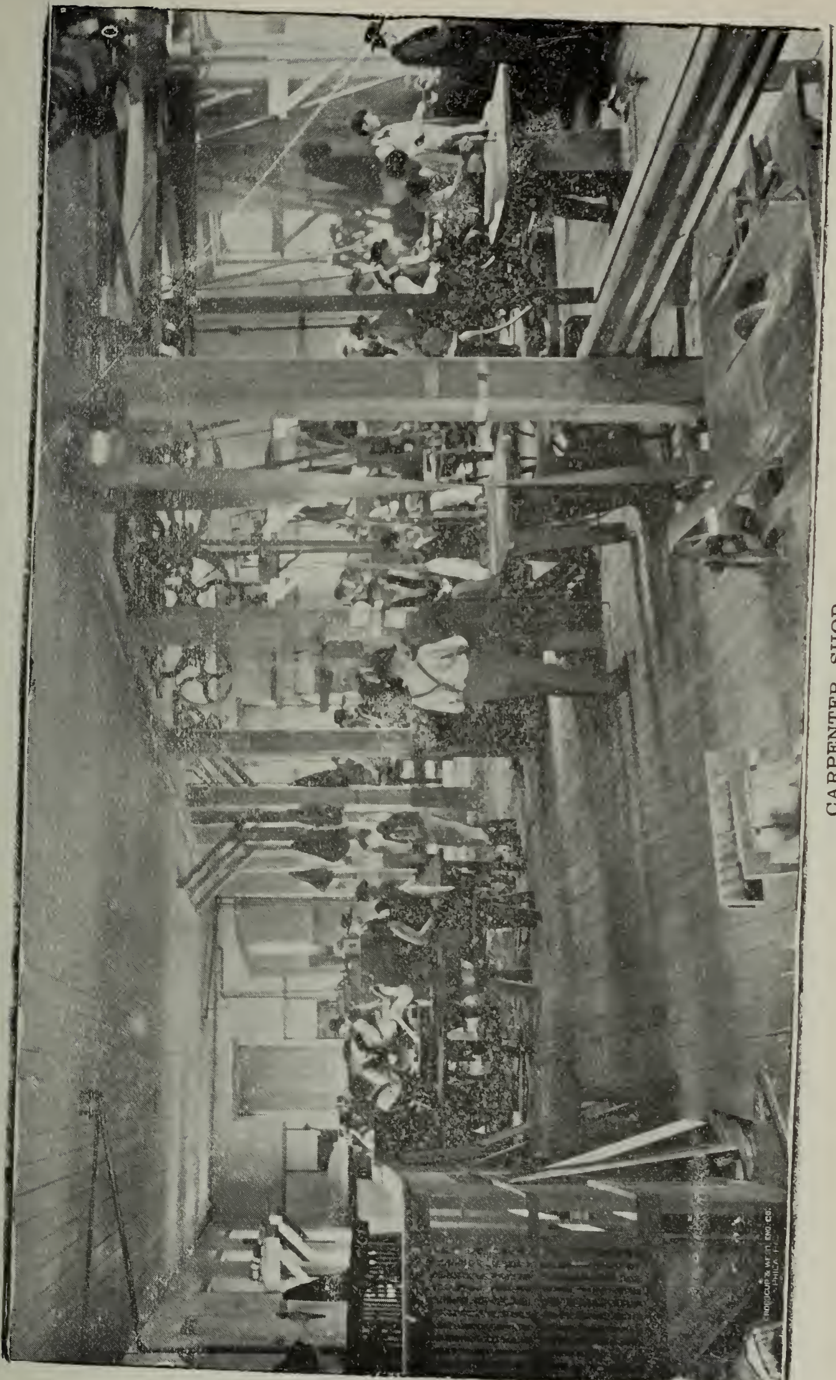
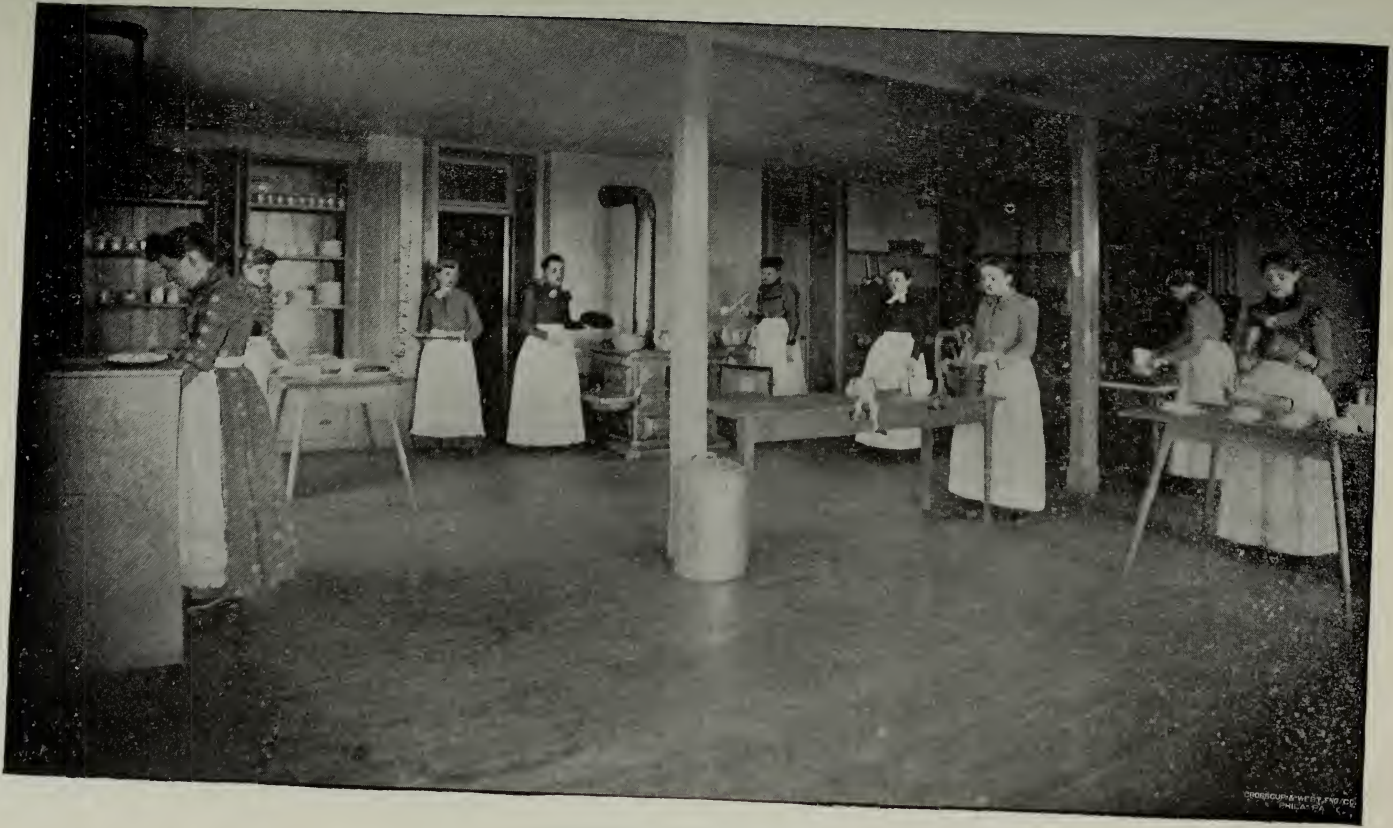
CHEMICAL LABORATORY. ANALYTICAL ROOM.



DEPARTMENT OF INDUSTRIAL ART.



CARPENTER SHOP.


CROSSCUP & WEST ENG. CO. PHILA. PA.

KITCHEN LABORATORY.

PRINTING DEPARTMENT.

SEWING DEPARTMENT.

LABOR AND EARNINGS.

Every encouragement is given to habits of daily manual labor during the College course. Only one hour of daily practice in the industrial departments is required; but students are encouraged to make use of other opportunities for adding to their ability and means.

All labor at the College is under the direction of the Superintendents of the departments, and offers opportunities for increasing skill and efficiency. In regular weekly statements, the students are required to observe business forms and principles, showing from their daily account when and where the work was performed.

The shops and offices are opened afternoons and Saturdays for the accommodation of skilled students in work for their own advantage. Everywhere the student who works wins respect; and it is a matter of pride to earn one's way as far as possible.

The labor of the students in the industrial departments is principally a part of their education, and is not paid for unless the student is employed upon work for the profit of the College. Students are so employed upon the farm, in the gardens or the shops, and about the buildings. The labor is paid for at rates varying with services rendered, from eight to ten cents an hour. The Superintendents strive to adjust their work to the necessities of students and give them the preference in all tasks suitable for their employment. So far as practicable, the work of the shops and offices is turned to account for their benefit; and the increasing extent of the grounds and sample gardens brings more of such labor. The monthly pay-roll for the past year ranges from $250 to $400.

Many students obtain work in the city or upon neighboring farms, and so pay part of their expenses. In these ways a few students are able to earn their way through College. The amount so earned will vary according to the tact and zeal of the student. The majority must expect to provide by earnings outside of term-time, or from other sources, for the larger part of their expenses. The long summer vacation of three months offers opportunity for farm or other remunerative labor; and no one need despair of gaining an education if he has the ability to use his chances well.

EXPENSES.

Tuition is free, and no general fee for incidental or contingent expenses is charged. In a few special departments of instruction, the following payments are made in advance to the Secretary:

In the term of Analytical Chemistry, students pay $3 for the chemicals and apparatus used in their laboratory practice and analysis.

In the Printing Office, young men in their first year pay $3 a term for office expenses. Advanced students have the use of the office for the work performed during the industrial hours.

Young women are furnished Printing free of expense; this, with the

Sewing and Cooking Departments, being provided especially for their industrial training.

Lessons in instrumental music — two a week — are from $10 to $14 a term, according to its length; one a week, $6 to $8.40. In classes of two or more at a less rate. One-half is to be paid to the instructor in charge with the first lesson, the other half at the middle of the term.

The cost of text-books at the book-stores is, for the first year, about $4 a term; for the second year, $2.75 a term; for the third year, $7 a term; and for the fourth year, $5.50 a term.

The expenses for apparatus and tools to each student during the course are as follows: Drawing, $3.50; microscope for Botany and Entomology, $1.50; case, pins, etc., for Entomology, $2.25. The total expense for these articles during the four years is less than ten dollars.

Board and washing are not furnished by the College. Board, with furnished rooms, can be procured in private families at from $2.75 to $4 per week. Some students board themselves at even less cost; and rooms for the purpose can be obtained at a rent of from $1 to $3.50 a month. Washing costs from 50c. to $1 a dozen pieces.

Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 a year.

BUSINESS DIRECTIONS.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid at the office of the Treasurer, in Manhattan.

All payments of principal and interest on account of bonds or land contracts must be made to the State Treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. Geo. T. Fairchild, Managing Editor. Subscriptions are received by Supt. J. S. C. Thompson.

Donations for the Library or Museums should be sent to the Librarian, or to Prof. Kellerman, Chairman of Committee on Museums.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several Professors and Superintendents.

General information concerning the College and its work, — studies, examinations, grades, boarding-places, etc., — may be obtained at the office of the President, or by addressing the Secretary.

Applications for Farmers' Institutes should be addressed, as early in the season as possible, to the President.

The Experiment Station should be addressed through the Secretary of the Council.

Graduates.

1867.

Henry L. Denison, A. M., Galveston, Texas. Secretary of Gulf Improvement Company.

Belle M. Haines *Pond*, A. M., Topeka, Kas. Housewife.

Emma L. Haines *Bowen*, A. M., Manhattan, Kas. Housewife.

John J. Points, A. M., Omaha, Neb. Lawyer.

Martha A. White *Abbott*, A. M., Chicago, Ill. Housewife.

1871.

Emily M. Campbell *Robinson*, A. B. Died in 1877.

Ella F. Denison *Whedon*, A. B., Lincoln, Neb. Housewife.

Luella M. Houston, A. B., Concordia, Kas. Milliner and dressmaker.

Charles O. Whedon, B. Sc., Lincoln, Neb. Lawyer.

Kate E. White *Turley*, A. B., Chicago, Ill. Housewife.

1872.

Theophania M. Haines *Huntington*, A. B. Died in 1880.

Albert Todd, A. M., Fort Riley, Kas. Lieutenant First U. S. Artillery.

S. Wendell Williston, A. M., M. D., Lawrence, Kansas. Professor of Paleontology and Director of the State University Geological Survey.

1873.

Eliza Z. Davis *Stringfield*, A. B., Pomona, Cal. Housewife.

Sam Kimble, A. B., Manhattan, Kas. Lawyer.

1874.

Harry A. Brous, A. M., M. D., Philadelphia, Pa. Physician.

Edgar F. Clark, A. B., Ellsworth, Kas. Lawyer.

John E. Davis, B. Sc., D. D. S., Oakland, Cal. Dentist.

William D. Gilbert, A. B., Atchison, Kas. Lawyer.

A. Judson White, A. B., Atchison, Kas. Minister.

1875.

Reuben E. Lofinck, B. Sc., Manhattan, Kas. Merchant.

Alice E. Stewart *Points*, A. M., Omaha, Neb. Housewife.

1876.

George A. Gale, A. B., Lake Worth, Fla. Fruit-grower.

Ella M. Gale *Kedzie*, A. B., Olivet, Mich. Art instructor in Olivet College.

Nellie Sawyer *Kedzie*, M. Sc., Manhattan, Kas. Professor of Household Economy and Hygiene in Kansas State Agricultural College.

Carrie M. Kimball, A. B., Garden Grove, Cal. Art instructor.

Minerva E. Whitman *Heiser*, A. B., Lyndon, Kas. Housewife.

1877.

Ella S. Child, B. Sc., Manhattan, Kas. Teacher.

George H. Failyer, M. Sc., Manhattan, Kas. Professor of Chemistry in Kansas State Agricultural College.

John S. Griffing, M. Sc., Topeka, Kas. Merchant.

Walter C. Howard, B. Sc., Winnebago, Ill. Minister.

Frederick O. Hoyt, B. Sc. Died in 1884.

Louis E. Humphrey, B. Sc., Chapman, Kas. Druggist.

James F. La Tourette, B. Sc., Wagon Mound, N. M. Stock-raiser.

Marion F. Leasure, B. Sc., La Cygne, Kas. Lawyer.

William Ulrich, M. Sc., Manhattan, Kas. Contractor and builder.

1878.

Albert N. Godfrey, M. Sc., Madison, Kas. Farmer and fruit-grower.

Charles S. McConnell, B. Sc. Printer.

Geo. S. Platt, B. Sc. Died in 1878.

Amos E. Wilson, B. Sc., McPherson, Kas. Banker.

1879.

Arthur T. Blain, B. Sc., Duarte, Cal. Nurseryman.

Etta Campbell *Blain*, B. Sc., Duarte, Cal. Housewife.

Wilmer K. Eckman, B. Sc., Atchison, Kas. Lumber dealer.

Corvin J. Reed, B. Sc., St. Clere, Kas. Farmer.

Harry C. Rushmore, B. Sc., Fort Payne, Ala. Merchant.

William H. Sikes, B. Sc., Leonardville, Kas. Merchant and grain dealer.

Lewis A. Salter, B. Sc., Argonia, Kas. Merchant.

Ella Vincent *McCormick*, B. Sc., Clay Center, Kas. Bookkeeper.

Clarence E. Wood, B. Sc., A. B., Denver, Colo. Printer.

1880.

Augustine Beacham, B. Sc., Seattle, Wash. Lawyer.

Lizzie R. Cox *Kregar*, B. Sc., Milford, Kas. Housewife.

Emma Hoyt *Turner*, B. Sc., St. Paul, Minn. Housewife.

Emma Knostman *Huse*, B. Sc., Arkansas City, Kas. Housewife.

Grace Parker *Perry*, B. Sc., Kiowa, Kas. Housewife.

Noble A. Richardson, B. Sc., San Bernardino, Cal. Superintendent of city schools.

Maria E. Sickels *Davis*, B. Sc., Chicago, Ill. Housewife.

1881.

Flora Donaldson *Reed*, B. Sc., St. Clere, Kas. Housewife.

Ulysses G. Houston, B. Sc., Manhattan, Kas. Inventor.

Fletcher M. Jeffrey, B. Sc., Escondido, Cal. Lawyer.

William J. Jeffrey, B.Sc., San Diego, Cal. Agent.

Darwin S. Leach, B.Sc., Georgetown, New Mexico. Superintendent of city schools.

William J. Lightfoot, B.Sc., Manhattan, Kas. Civil engineer.

Dalinda Mason *Cotey*, B.Sc., Manhattan, Kas. Housewife.

Wirt S. Myers, B.Sc., Tampa, Florida. Furniture manufacturer.

1882.

J. Chester Allen, B.Sc. Died in 1885.

Ida Cranford *Sloan*, B.Sc., Shasta county, Cal. Housewife.

Edward V. Cripps, B.Sc., Boston, Mass. Teacher of elocution.

Warren Knaus, M.Sc., McPherson, Kas. Editor and entomologist.

Mattie E. Mails *Coons*, B.Sc., Manhattan, Kas. Housewife.

Allie S. Peckham *Cordry*, B.Sc., Belleville, Kas. Housewife.

Belle Selby, B.Sc., New York. Teacher of Art.

Burton L. Short, B.Sc., Kansas City, Kas. Clerk in Register of Deeds office.

John A. Sloan, B.Sc., Shasta Co., Cal. Farmer and nurseryman.

1883.

James W. Berry, B.Sc., Jewell City, Kas. Farmer, contractor, and builder.

Mary C. Bower, B.Sc., Manhattan, Kas. Clerk.

Lewis W. Call, B.Sc., Washington, D. C. Clerk in Attorney General's office.

Emma E. Glossop, B.Sc., Manhattan, Kas. Teacher.

William J. Griffing, B.Sc., Manhattan, Kas. Farmer and fruit-grower.

Phœbe E. Haines, M.Sc., Las Cruces, N. M. Professor of Industrial Art in State Agricultural College.

Hortense L. Houston, B.Sc., Concordia, Kas. Music teacher.

Jacob Lund, M.Sc., Sidney, Wash. Mechanical engineer.

Katie I. Meguire *Sheldon*, B.Sc., Riverside, Cal. Housewife.

J. Dana Needham, B.Sc., Lane, Kas. Merchant.

Milan T. Ward, B.Sc., M.D., Orion, Ill. Physician.

Julius T. Willard, M.Sc., Manhattan, Kas. Assistant in Chemistry, Experiment Station, Kansas State Agricultural College.

1884.

Emmett S. Andress, B.Sc., Lakin, Kas. Farmer and stock-raiser.

Florence J. Brous, B.Sc., Kansas City, Kas. Teacher.

Bartholomew Buchli, M.Sc., V.S.D., Paxico, Kas. Veterinary surgeon.

John H. Calvin, B.Sc., Topeka, Kas. Lawyer.

Wm. A. Corey, B.Sc., Salt Lake City, Utah. Teacher.

Henry M. Cottrell, M.Sc. Assistant in Agriculture, Experiment Station, Kansas State Agricultural College, Manhattan, Kas.

Carrie F. Donaldson *Brown*, B.Sc., Portland, Oregon. Housewife.

Florence A. Donaldson, B.Sc. Died in August, 1888.

Frank W. Dunn, B.Sc., New Castle, Colo. Farmer and fruit-grower.

I. Day Gardiner, B.Sc., Alma, Kas. Editor.

Edwin H. Kern, B.Sc., Mankato, Kas. Civil engineer and horticulturist.

Marion M. Lewis, B.Sc., Nebraska City, Neb. Minister.

Charles L. Marlatt, M.Sc., Washington, D. C. Assistant in Entomological Division, U. S. Department of Agriculture.

Lincoln H. Neiswender, B.Sc., Silver Lake, Kas. Farmer.

Geo. C. Peck, B.Sc., Junction City, Kas. Printer.

Hattie L. Peck *Berry*, B.Sc., Jewell City, Kas. Housewife.

John W. Shartel, B.Sc., Winfield, Kas. Lawyer.

1885.

Thomas Bassler, B.Sc., Louisiana, Mo. Nurseryman.

Albert Deitz, B.Sc., Kansas City, Mo. Merchant.

George E. Hopper, M.Sc., Manhattan, Kas. City Engineer and Superintendent of water works.

Florence F. Hough, B.Sc., Melrose, Iowa. At home.

Frank A. Hutto, B.Sc., Stillwater, Ok. Lawyer.

Allen Lewis, B.Sc., Topeka, Kas. Civil engineer.

Nellie J. Murphy, B.Sc., Idana, Kas. Teacher.

Arthur L. Noyes, B.Sc., Wabaunsee, Kas. Electrical engineer.

Clarence D. Pratt, B.Sc., Salt Lake City, Utah. Civil engineer.

Rollin R. Rees, B.Sc., Minneapolis, Kas. Lawyer.

Frederick J. Rogers, M.Sc., Ithaca, N. Y. Special student in Cornell University.

Dorothy E. C. Secrest *Hungerford*, B.Sc., Manhattan, Kas. Housewife.

Grace Wonsetler, B.Sc., Verbeck, Kas. Teacher.

Effie E. Woods *Shartel*, B.Sc., Winfield, Kas. Housewife.

1886.

Lillie B. Bridgeman, B.Sc., Kansas City, Kas. Teacher.

Louis P. Brous, B.Sc., Eurgene, Oregon. Draughtsman and topographical engineer.

Paul H. Fairchild, B.Sc., M. D., Brooklyn, N. Y. Physician.

Abbott M. Green, B.Sc., Santa Barbara, Cal. Civil engineer and teacher.

James G. Harbord, B. Sc., Fort Sherman, Idaho. Regimental quartermaster, Fourth U. S. Infantry.

John U. Higinbotham, B.Sc., Chicago, Ill. Cashier wholesale house.

Maria C. Hopper *Getty*, B.Sc., Downs, Kas. Housewife.

E. Ada Little, B.Sc., Manhattan, Kas. Assistant in sewing, and post-graduate student, State Agricultural College.

Frank L. Parker, B.Sc., Pueblo, Col. Telegraph operator.

Edward H. Perry, B. Sc., Topeka, Kas. Real-estate agent.

H. Augustus Platt, B.Sc., Coronado, Kas. Farmer and County Clerk.

ADA H. QUINBY *Perry*, B. Sc., Topeka, Kas. Housewife.

IDA H. QUINBY *Gardiner*, B. Sc., Alma, Kas. Housewife.

MINNIE REED, B. Sc., Argentine, Kas. Teacher.

DAVID G. ROBERTSON, B. Sc., Osborne, Kas. Lawyer.

EDWARD O. SISSON, B. Sc., Mound City, Kas. Superintendent of schools.

JOHN W. VAN DEVENTER, B. Sc., Imperial, Neb. Editor.

GEORGE W. WATERS, B. Sc., Riley, Kas. Mail-route agent.

WILLIAM E. WHALEY, B. Sc., Manhattan, Kas. Superintendent of city schools.

F. HENRIETTA WILLARD *Calvin*, B. Sc., Topeka, Kas. Housewife.

JOHN L. WISE, B. Sc., Smithboro, Ill. Merchant.

1887.

EDGAR A. ALLEN, B. Sc., Chicago, Ill. Teacher and law student.

FRED. H. AVERY, B. Sc., Wakefield, Kas. Farmer and horse-breeder.

CLAUDE M. BREESE, M. Sc., Manhattan, Kas. Assistant in Chemistry, Kansas State Agricultural College.

JOHN B. BROWN, B. Sc., Nashville, Tenn. Observer, U. S. Signal Service.

WALTER J. G. BURTIS, B. Sc., Fredonia. Farmer and teacher.

MARK A. CARLETON, B. Sc., Wichita, Kas. Professor of Natural History, Garfield University.

NELLIE E. COTTRELL *Stiles*, B. Sc., Pavilion, Kas. Housewife.

BERT R. ELLIOTT, B. Sc., Nederland, Colo. At work on a ranch.

FREDERICK B. ELLIOTT, B. Sc., Manhattan, Kas. Clerk in land and loan office.

CLARA M. KEYES, B. Sc., Banner, Cal. Teacher.

FRED. G. KIMBALL, B. Sc., Garden Grove, Cal. Carpenter.

FREDERICK A. MARLATT, B. Sc., Manhattan, Kas. Assistant in Entomology, Experiment Station, Kansas State Agricultural College.

WILLIAM J. MCLAUGHLIN, B. Sc., Centralia, Kas. Farmer and civil engineer.

MARY E. MOSES, B. Sc., Manhattan, Kas. At home.

CHARLES A. MURPHY, B. Sc., Argentine, Kas. Teacher.

ORLANDO G. PALMER, B. Sc., Washington, D. C. Clerk Census Bureau.

LOUIS B. PARKER, B. Sc. Died in June, 1889.

JAMES E. PAYNE, B. Sc. Student of horticulture, Mississippi State Agricultural College.

SEWARD N. PECK, B. Sc., Topeka, Kas. Mechanic in Santa Fé railroad shops.

GEORGE N. THOMPSON, B. Sc., Belmond, Iowa. Carpenter.

WILLIS M. WRIGHT, B. Sc., Lake Arthur, La. Farmer.

1888.

GRANT ARNOLD, B. Sc., Toledo, Wash. Teacher.

BERTHA H. BACHELLER, B. Sc., Manhattan, Kas. Student instructor in Kansas State Agricultural College.

Clement G. Clarke, B. Sc., New Haven, Conn. Student in Yale University.

Alexander C. Cobb, B. Sc., Wagoner, Ind. Ter. Farmer and carpenter.

Mattie Cobb, B. Sc., Wagoner, Ind. Ter. Teacher.

Minnie H. Cowell, B. Sc., Hempstead Road, London, Eng. Hospital nurse.

Lyman H. Dixon, B. Sc., Bent Cañon, Col. Draughtsman.

David G. Fairchild, B. Sc., Washington, D. C. Assistant in Division of Vegetable Pathology, U. S. Department of Agriculture.

Carl E. Friend, B. Sc., Ontario, Kas. Lumber merchant.

John R. Harrison. B. Sc., Salina, Kas. Mail-route agent.

Humphrey W. Jones, B. Sc., Americus, Kas. Superintendent of schools.

Nathan E. Lewis, B. Sc., Hamilton, Ohio. Draughtsman.

Abbie L. Marlatt, M. Sc., Logan, Utah. Instructor in Domestic Economy, State Agricultural College.

William C. Moore, B. Sc., Junction City, Kas. Editor.

Ernest F. Nichols, B. Sc., Ithaca, N. Y. Special student in Cornell University.

Harry E. Robb, B. Sc., Neal, Kas. Farmer.

Anna Snyder, B. Sc., Oskaloosa, Kas. At home.

Edwin H. Snyder, B. Sc., Highlands, Col. Editor.

Oliver L. Utter, B. Sc. Student in State Normal School.

Aaron Walters, B. Sc. Student of law, Golden, Col.

Lora L. Waters, B. Sc., Junction City, Kas. Teacher.

Daniel W. Working, Jr., B. Sc., Denver, Col. Editor of Colorado Fancier and Farm Herald.

1889.

Emma A. Allen, B. Sc., Manhattan, Kas. Student Assistant in Experiment Station, Botany.

Joseph W. Bayles, B. Sc., Riley, Kas. Teacher.

Walter R. Browning, B. Sc., Hamlin, Kas. Civil engineer.

David E. Bundy, B. Sc., Blue Rapids, Kas. Farmer.

Samuel S. Cobb, B. Sc., Wagoner, I. T. Druggist and postmaster.

Judson H. Criswell, B. Sc., Manhattan, Kas. Farmer.

Mattie I. Farley *Carr*, B. Sc., Ruby, Wash. Housewife.

Clarence E. Freeman, B. Sc., North Topeka, Kas. Principal of Shorey school.

Hattie L. Gale *Sanders*, B. Sc., Lake Worth, Fla. Housewife.

John S. Hazen, B. Sc., Fort Apache, Ariz. U. S. Signal Service observer.

Albert B. Kimball, B. Sc., Manhattan, Kas. Post-graduate student in entomology and horticulture, Kansas State Agricultural College.

William Knabb, B. Sc., Hiawatha, Kas. Bank clerk.

Mary C. Lee, B. Sc., Manhattan, Kas. Teacher.

Alonzo A. Mills, B. Sc., Logan, Utah. Assistant to the Director, Agricultural Experiment Station, Utah.

Susan W. Nichols, B. Sc., St. Joseph, Mo. Music teacher.

Walter H. Olin, B.Sc., Waverly, Kas. Principal of school.

Eli M. Paddleford, B.Sc., Riley, Kas. Principal of school.

Maude F. Sayres, B.Sc., Ottawa, Kas. At home.

Florine Secrest, B.Sc., San José, Cal. Teacher.

Stanley Snyder, B.Sc., Oskaloosa, Kas. Farmer.

Charles W. Thompson, B.Sc., Edwardsville, Kas. Student of dentistry.

Jane C. Tunnell, B.Sc., Manhattan, Kas. Assistant Librarian, Kansas State Agricultural College.

Ina M. Turner, B.Sc., Topeka, Kas. Printer.

Robert U. Waldraven, B.Sc., Parallel, Kas. Teacher and farmer.

Henry S. Willard, B.Sc., Manhattan, Kas. Student of medicine.

1890.

Samuel I. Borton, B.Sc., Hilltop, Kas. Farmer.

Frank A. Campbell, B.Sc., Highlands, Col. Newspaper reporter.

Arthur F. Cranston, B.Sc., Parsons, Kas. Student of Law.

John Davis, B.Sc., Walcott, Ind. Teacher.

Grant W. Dewey, B.Sc., Manhattan, Kas. Photographer.

Charles J. Dobbs, B.Sc., Topeka, Kas. Student of law.

Charles W. Earle, B.Sc., Denver, Col. Advertising agent.

Schuyler C. Harner, B.Sc., Leonardville, Kas. Teacher.

John W. Ijams, B.Sc., Ozawkie, Kas. Farmer.

Bertha S. Kimball, B.Sc., Manhattan, Kas. Post-graduate student in botany and entomology, Kansas State Agricultural College.

Harriet E. Knipe, B.Sc.. Manhattan, Kas. Post-graduate student in domestic economy, Kansas State Agricultural College.

Nellie P. Little, B.Sc., Manhattan, Kas. Teacher.

Ellsworth Thomas Martin, B.Sc., Georgetown, Col. Miner and solicitor.

Silas C. Mason, B.Sc., Manhattan, Kas. Assistant in Horticulture, Experiment Station, Kansas State Agricultural College.

Wilton L. Morse, B.Sc., Maneos, Col. Teacher.

Albert E. Newman, B.Sc., Lashnet, Kas. Farmer.

Julia R. Pearce, B.Sc., Manhattan, Kas. Clerk in executive offices.

Emil C. Pfeutze, B.Sc., Manhattan, Kas. Engineer of Manhattan water works.

William H. Sanders, B.Sc., Lake Worth, Fla. Teacher.

Emma Secrest, B.Sc., Riley, Kas. Teacher.

Mary B. Senn, B.Sc., Enterprise, Kas. Teacher.

Ralph Snyder, B.Sc., Oskaloosa, Kas. Farmer.

George E. Stoker, B.Sc., Topeka, Kas. Clerk in Santa Fé general offices.

Walter T. Swingle, B.Sc., Washington, D. C. Assistant in Division of Vegetable Pathology, Department of Agriculture, Washington, D. C.

Gilbert J. Van Zile, B.Sc., Georgetown, Col. Miner and solicitor.

Harry N. Whitford, B.Sc., Manhattan, Kas. Teacher.

Thomas E. Wimer, B.Sc., died in June, 1890.

SUMMARY.

During the twenty-eight years of its existence the College has received over three thousand students, about a third of whom were young women. Most of them have come from farmers' homes, and after from three months to three years of study, have gone back to such homes without graduation.

The number of graduates up to 1890 is 232, of whom 73 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of Bachelor of Arts. Since 1877, all have received the degree of Bachelor of Science after a four-years course in the sciences, with good English training.

Of the 159 men, 5 are deceased, and the remainder are reported in the following occupations:

Farmers	24
Fruit-growers and nurserymen	8
Stock-raisers	3
Assistants in agricultural experiment stations	5
Assistants in U. S. Department of Agriculture	3
Editor of agricultural paper	1
Teachers and students of special sciences	9
Veterinary surgeon	1
Mechanics	5
Civil, electrical, and mechanical engineers	14
Contractors and builders	2
Architects and draughtsmen	3
General business men	16
Merchants	8
Printers	3
Photographer	1
Superintendents of public schools	7
Teachers of public schools	15
Students in other institutions	2
Officers in Army	2
Observers in Weather Service	2
Physicians and students of medicine	4
Druggists	2
Dentists	2
Editors	5
Ministers	3
Lawyers and students of law	17
Officials and official clerks	4
Total	171
In two occupations	17
	154

Of the 73 women, 3 are deceased, and the remainder are occupied as follows:

Housewives	31
At home	4
Teachers in public schools	15
Teachers and students of special sciences	8
Teachers of music	2
Teachers of art	3
Clerks or stenographers	3
Printer	1
Milliner and dressmaker	1
Assistant librarian	1
Hospital nurse	1
Total	70

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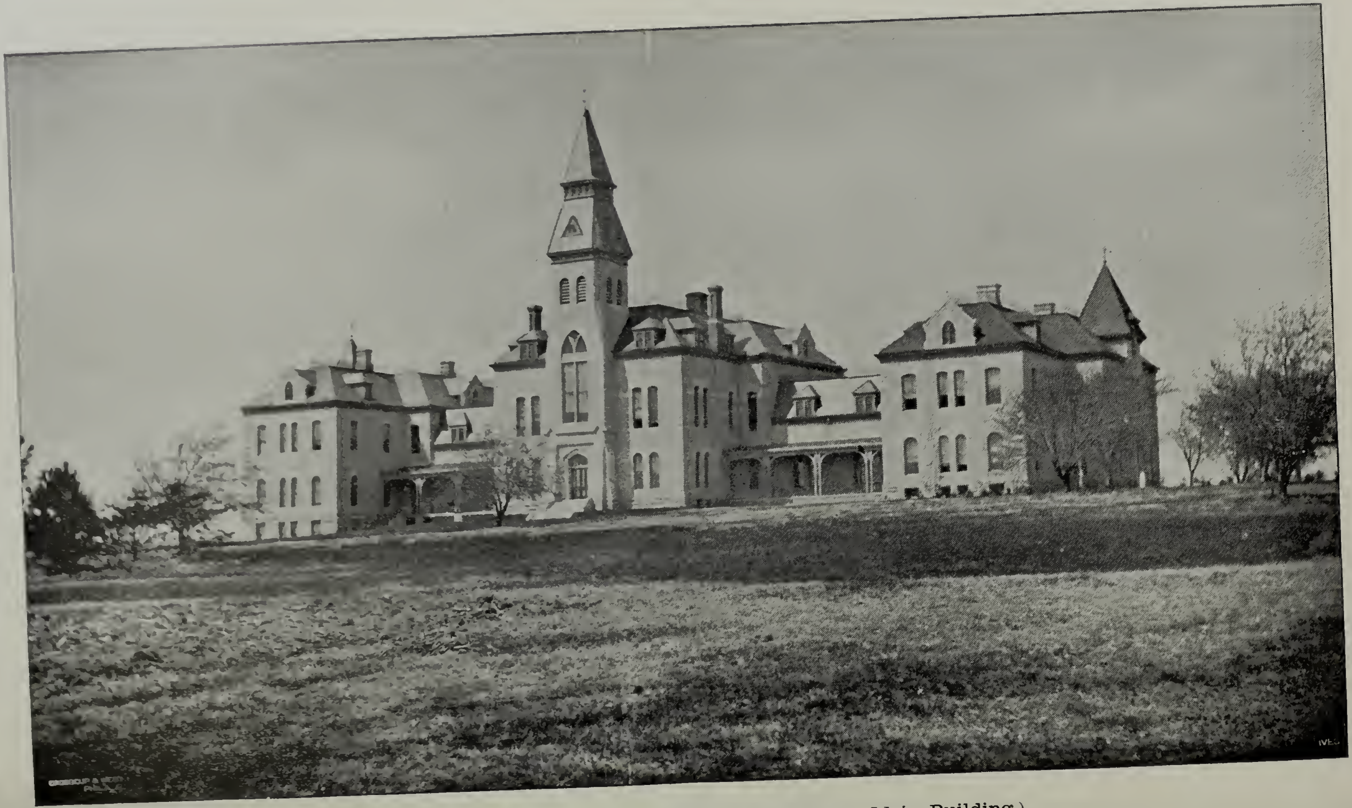
KANSAS STATE AGRICULTURAL COLLEGE. (General View.)



KANSAS STATE AGRICULTURAL COLLEGE. (Main Building.)

TWENTY-NINTH ANNUAL CATALOGUE

OF THE

OFFICERS, STUDENTS AND GRADUATES

OF THE

STATE AGRICULTURAL COLLEGE

OF KANSAS.

1891–'92.

MANHATTAN, KANSAS.

TOPEKA.
PRESS OF THE HAMILTON PRINTING COMPANY:
EDWIN H. SNOW, State Printer.
1892.

TERMS AND VACATIONS.

FALL TERM, 1892.

WEDNESDAY, SEPT. 14.—Examination for admission, at 9 A.M.
THURSDAY, SEPT. 15.—College year begins.
FRIDAY, OCT. 28.—Examination.
FRIDAY, DEC. 9.—Annual Exhibition of the Alpha Beta Society.
THURSDAY AND FRIDAY, DEC. 22, 23.—Examination at close of Fall term.
DECEMBER 24 TO JANUARY 9.—Winter vacation.

WINTER TERM, 1893.

MONDAY, JAN. 9.—Examination for admission, at 9 A.M.
TUESDAY, JAN. 10.—Winter term begins.
SATURDAY, FEB. 4.—Annual Exhibition of the Hamilton Society.
FRIDAY, FEB. 17.—Examination.
SATURDAY, MAR. 18.—Annual Exhibition of the Webster Society.
THURSDAY AND FRIDAY, MAR. 30, 31.—Examination, close of Winter term.

SPRING TERM, 1893.

MONDAY, APRIL 3.—Spring Term begins.
FRIDAY, APRIL 28.—Annual Exhibition of the Ionian Society.
FRIDAY, MAY 5.—Examination.
MONDAY AND TUESDAY, JUNE 12, 13.—Examination at close of year.
JUNE 11 TO 14.—Exercises of Commencement week.
WEDNESDAY, JUNE 14, AT 10 A. M.—Commencement.
JUNE 15 TO SEPTEMBER 13.—Summer vacation.

FALL TERM, 1893.

WEDNESDAY, SEPT. 13.—Examination for admission, at 9 A.M.
THURSDAY, SEPT. 14.—College year begins.

BOARD OF REGENTS.

HON. A. P. FORSYTH, (1894,)* *President*,
Liberty, Montgomery Co.

HON. R. W. FINLEY, (1893,) *Vice President*,
Goodland, Sherman Co.

HON. T. P. MOORE, (1893,) *Loan Commissioner*,
Holton, Jackson Co.

HON. JOSHUA WHEELER, (1894,) *Treasurer*,
Nortonville, Jefferson Co.

HON. F. M. CHAFFEE, (1895,)
Wyckoff, Lyon Co.

HON. R. P. KELLEY, (1895,)
Eureka, Greenwood Co.

PRESIDENT GEO. T. FAIRCHILD, (*ex officio*,) *Secretary*,
Manhattan, Riley Co.

I. D. GRAHAM, *Assistant Secretary*,
Manhattan, Riley Co.

---

*Term expires.

30726

BOARD OF INSTRUCTION.

FACULTY.

GEORGE T. FAIRCHILD, A. M., PRESIDENT,
Professor of Logic and Political Economy.

GEORGE H. FAILYER, M. Sc.,
Professor of Chemistry and Mineralogy.

EDWIN A. POPENOE, A. M.,
Professor of Horticulture and Entomology, Superintendent of Orchards and Gardens.

DAVID ERNEST LANTZ, M. Sc.,
Professor of Mathematics, Librarian.

JOHN D. WALTERS, M. Sc.,
Professor of Industrial Art and Designing.

IRA D. GRAHAM, B. Sc.,
Secretary, Instructor in Book-keeping.

OSCAR EUGENE OLIN,
Professor of English Language and Literature.

MRS. NELLIE SAWYER KEDZIE, M. Sc.,
Professor of Household Economy and Hygiene.

MRS. ELIDA E. WINCHIP,
Superintendent of Sewing.

OZNI P. HOOD, B. Sc.,
Professor of Mechanics and Engineering, Superintendent of Workshops.

ALEXANDER B. BROWN, A. M.,
Professor of Music.

JOHN S. C. THOMPSON.
Superintendent of Printing.

FRANCIS H. WHITE, A.M.,
Professor of History and Constitutional Law.

CHARLES C. GEORGESON, M. Sc.,
Professor of Agriculture, Superintendent of Farm.

EDWIN B. BOLTON, CAPTAIN 23D U. S. INFANTRY.
Professor of Military Science and Tactics.

ERNEST REUBEN NICHOLS, A. M.,
Professor of Physics.

NELSON S. MAYO, D. V. S., M. Sc.,
Professor of Physiology and Veterinary Science.

JULIUS T. WILLARD, M. Sc.,
Assistant Professor of Chemistry.

JAMES W. RAIN,
Instructor in English.

ALBERT S. HITCHCOCK, M. Sc.,
Professor of Botany.

OTHER OFFICERS.

CLAUDE M. BREESE, M. Sc., Assistant in Chemistry.
JENNIE C. TUNNELL, B. Sc., Assistant Librarian.
JULIA R. PEARCE, B. Sc., Clerk in Executive Offices.
E. ADA LITTLE, B. Sc., Assistant in Sewing.
WILLIAM BAXTER, Foreman of Greenhouse.
WILLIAM L. HOUSE, Foreman of Carpenter Shop.
E. HARROLD, Foreman of Iron Shop.
CHARLES A. GUNDAKER, Engineer.
ANDREW C. McCREARY, Janitor.

STUDENT ASSISTANTS.

MINNIE REED, B. Sc., Geography and English.
JUDD N. BRIDGMAN, B. Sc., Mathematics.
LOTTIE SHORT, B. Sc., Household Economy.
GEORGE L. CLOTHIER, Horticulture.
HENRY C. COBB, Mineralogy.
ALBERT DICKENS, Horticulture.
J N HARNER, Agriculture.
LOYALL S. HARNER, Agriculture.
CHARLES P. HARTLEY, Horticulture.
ROBERT A. McILVANE, Agriculture.
ELIAS W. REED, Mineralogy.
ARTHUR D. RICE, Agriculture and English.
JOHN D. RIDDELL, Surveying.
FRED C. SEARS, Horticulture.
WILLIAM E. SMITH, Horticulture.
WALTER P. TUCKER, Printing.
ROBERT L. WALLIS, Agriculture.
GEORGE W. WILDIN, Wood-work and Surveying.

EXPERIMENT STATION.

COUNCIL.

PRESIDENT **FAIRCHILD**, Chairman, *ex officio.*
PROFESSOR **FAILYER**, Chemistry.
PROFESSOR **POPENOE**, Horticulture and Entomology.
PROFESSOR **GEORGESON**, Agriculture.
PROFESSOR **MAYO**, Veterinary Science.
PROFESSOR **HITCHCOCK**, Botany.

I. D. GRAHAM, Secretary.

ASSISTANTS AND FOREMEN.

J. T. WILLARD, M. Sc., Chemistry.
S. C. MASON, B. Sc., Horticulture, Foreman of Gardens.
F. A. MARLATT, B. Sc., Entomology.
WM. SHELTON, Foreman of Farm.
F. C. BURTIS, B. Sc., Agriculture.
M. A. CARLTON, B. Sc., Botany.

STUDENTS.

POST-GRADUATES.

RESIDENT.

William S. Arbuthnot, '91 .... *Veterinary Science.*
Cuba, Republic county.

Judd N. Bridgman, '91 .... *Mechanics and Physics.*
Manhattan, Riley county.

Rachel Callie Conwell, '91 .... *Domestic Economy.*
Manhattan, Riley county.

Helen Pearl Dow, '91 .... *Music.*
Manhattan, Riley county.

Delpha May Hoop, '91 .... *Domestic Economy.*
Manhattan, Riley county.

Bessie Belle Little, '91............... *Domestic Economy and Drawing.*
Manhattan, Riley county.

Minnie Reed, '86.................... *Botany and Domestic Economy.*
St. Clere, Pottawatomie county.

Marie B. Senn, '90 .... *Domestic Economy and Chemistry.*
Enterprise, Dickinson county.

Lottie Jane Short, '91............... *Domestic Economy and Chemistry.*
Blue Rapids, Marshall county.

NON-RESIDENT.

Walter Herbert Olin, '89............. *Agriculture and Botany.*
Osborne, Osborne county.

FOURTH YEAR.

Names.	*Post Office and County.*
Edwin Ransom Burtis,	Manhattan, Riley.
Grace Maria Clark,	Junction City, Geary.
George L. Clothier,	Vera, Wabaunsee.
Lilian Clyde Criner,	Moundridge, McPherson.
Harry Darnell,	Ward, Wilson.
William H. Edelblute,	Keats, Riley.
Elizabeth Edwards,	Abergele, *Wales.*
John Frost,	Blue Rapids, Marshall.
Effie Gilstrap,	Geuda Springs, Sumner.

Names.	*Post Office and County.*
Ava Hamill,	Olathe, Johnson.
J N Harner,	Green, Clay.
Loyall S. Harner,	Leonardville, Riley.
Charles Pinckney Hartley,	Manhattan, Riley.
John William Abraham Hartley,	Manhattan, Riley.
Robert Clayton Hunter,	Manhattan, Riley.
Fred Swift Little,	Manhattan, Riley.
James Laird McDowell,	Manhattan, Riley.
Robert A. McIlvaine,	Maryville, *Tennessee.*
Kate Oldham,	Keats, Riley.
Daniel Henry Otis,	Topeka, Shawnee.
Ivan Bryan Parker,	Hill City, Graham.
Warner S. Pope,	Cawker City, Mitchell.
Berton Homer Pugh,	Topeka, Shawnee.
Elias W. Reed,	St. Clere, Pottawatomie.
Robert Stirling Reed,	Cedar Point, Chase.
Arthur Daniel Rice,	Washington, Washington.
Fred C. Sears,	Tescott, Ottawa.
Birdie E. Secrest,	Randolph, Riley.
May Secrest,	Randolph, Riley.
Ruth Tipton Stokes,	Garnett, Anderson.
Walter Percival Tucker,	Douglass, Butler.
Mary Alice Vail,	Manhattan, Riley.
Robert Lynn Wallis,	Williamsburg, Franklin.
Ora Rebecca Wells,	Irving, Marshall.
Daniel F. Wickman,	Topeka, Shawnee.
George Washington Wildin,	Melvern, Osage.
Charles Ernest Yeoman,	La Crosse, Rush.

THIRD YEAR.

Edmund Clarence Abbott,	Garden City, Finney.
Edward Jones Abell,	Leonardville, Riley.
Milan O. Bacheller,	Nekoma, Rush.
Joe William Brooks,	Manhattan, Riley.
Henry Cowain Cobb,	Muskogee, *Indian Territory.*
Martha Amelia Cottrell,	Wabaunsee, Wabaunsee.
Edwin McMaster Stanton Curtis,	Council Grove, Morris.
Corinne Louise Daly,	Smith Center, Smith.
Laura Greeley Day,	Manhattan, Riley.
Ione Dewey,	Manhattan, Riley.
Albert Dickens,	Alden, Rice.
Charles Lawrence Gall,	Burlingame, Osage.
Mary Maud Gardiner,	Bradford, Waubaunsee.
Ivy Frances Harner,	Leonardville, Riley.

Names.	*Post Office and County.*
Romeo C. Harner,	Green, Clay.
Mark V. Hester,	Haviland, Kiowa.
Margaretha Elise Horn,	Westerbergen, *Germany.*
Mac F. Hulett,	Edgerton, Johnson.
Onie Hulett,	Edgerton, Johnson.
Fred Hulse,	Keats, Riley.
Charles R. Hutchings,	Pomona, Franklin.
Charles Edward Jennings,	Weskan, Wallace.
Samuel B. Johnson,	Melvern, Osage.
Charles Augustus Kimball,	Manhattan, Riley.
Maude Knickerbocker,	Long Pine, *Nebraska.*
Robert McIntosh Laundy,	Wreford, Geary.
Mary Eliza Lyman,	Manhattan, Riley.
Thomas Eddy Lyon,	Riley, Riley.
William Otis Lyon,	Manhattan, Riley.
McLeod Wilson McCrea,	Dunavant, Jefferson.
Rose Edith McDowell,	Manhattan, Riley.
William Henry Moore,	Manhattan, Riley.
William Douglas Morrison,	Arispie, Pottawatomie.
Eusebia DeLong Mudge,	Eskridge, Wabaunsee.
Nora Newell,	Manhattan, Riley.
August Fred Niemoller,	Stitt, Dickinson.
Susie Amanda Noyes,	Wabaunsee, Wabaunsee.
Leon Olmstead,	Big Timber, *Montana.*
Henry Leamer Pellet,	Prairie Centre, Johnson.
Carl Frederic Pfuetze,	Manhattan, Riley.
Frederic Ellsworth Rader,	Manhattan, Riley.
John DeWitt Riddell,	Conway, McPherson.
John Albert Rokes,	Onaga, Pottawatomie.
Agnes Romick,	Manhattan, Riley.
Minnie Louisa Romick,	Manhattan, Riley.
Charles Baxter Selby,	Manhattan, Riley.
Fred Raymond Smith,	Manhattan, Riley.
George Wildman Smith,	Manhattan, Riley.
William Elmer Smith,	Manhattan, Riley.
Wesley O. Staver,	Dallas, *Missouri.*
Jessie Marie Stearns,	Mound City, Linn.
John Stingley,	Manhattan, Riley.
John Edwin Taylor,	Berryton, Shawnee.
John Eugene Thackrey,	Manhattan, Riley.
Joseph B. Thoburn,	Peabody, Marion.
Charles Henry Thompson,	Bakersfield, *California.*
George K. Thompson,	Irving, Marshall.
Phœbe Cary Turner,	Rock Creek, Jefferson.
Stephen Irenæus Wilken,	Bow Creek, Rooks.
William James Yeoman,	La Crosse, Rush.
John A. Zimmerman,	Olathe, Johnson.

SECOND YEAR.

Names.	*Post Office and County.*
Alice Abbott,	Garden City, Finney.
Raymond Barrington Abbott,	Garden City, Finney.
Carl D. Adams,	Osawkie, Jefferson.
Edith Etta Allman,	Manhattan, Riley.
Frank Weber Ames,	Riley, Riley.
William Thomas Anderson,	Parsons, Labette.
Orville Claude Axtell,	Plevna, Reno.
Alfonso K. Barnes,	Dover, Shawnee.
Eben M. Blachly,	Leonardville, Riley.
George Gordon Boardman,	Centralia, Nemaha.
Arthur Wiltshire Brewer,	Manhattan, Riley.
Mary Brooks,	Manhattan, Riley.
Hyman E. Brown,	Topeka, Shawnee.
William Brown,	Leavenworth, Leavenworth.
Clara F. Castle,	Manhattan, Riley.
George Luther Christensen,	Mariadahl, Pottawatomie.
John Cornelius Christensen,	Clarkson, Riley.
Earl Allen Clark,	Greenleaf, Washington.
Robert Abram Clark,	Burlington, Coffey.
Lorena Estella Clemons,	Alida, Geary.
Almond Coen,	Half Way, Cloud.
Florence Ruth Corbett,	Manhattan, Riley.
Sarah Esther Cottrell,	Wabaunsee, Wabaunsee.
Ernest Brown Coulson,	Anthony, Harper.
Alverta May Cress,	Manhattan, Riley.
Fannie Jane Cress,	Steubenville, *Ohio.*
Elsie Emeline Crump,	Manhattan, Riley.
David Thomas Davies,	Manhattan, Riley.
Daisy Day,	Onaga, Pottawatomie.
George Henry Dial,	Cleburne, Riley.
Lillie C. Dial,	Cleburne, Riley.
Martin Luther Dickson,	Edgerton, Johnson.
Harriet Elizabeth Dodson,	Wakefield, Clay.
George Doll,	Larned, Pawnee.
Ernest A. Donaven,	Agra, Phillips.
John Dougherty,	Manhattan, Riley.
Frank J. Downs,	Lyndon, Osage.
Victor Emrick,	Lone Tree, *Missouri.*
Jephthah W. Evans,	Manhattan, Riley.
Bertha Frances Fairchild,	Oberlin, *Ohio.*
Sprague Farman,	Manhattan, Riley.
Edward David Fay,	Downs, Osborne.
Josephine Finley,	Manhattan, Riley.
Mary Finley,	Manhattan, Riley.

Names.	*Post Office and County.*
Harry Thurman Fish,	La Crosse, Rush.
George Forsyth,	Howard, Elk.
Isabella Russell Frisbie,	Meriden, Jefferson.
Mildred Christine Frost,	Manhattan, Riley.
Eugene Leonard Frowe,	Louisville, Pottawatomie.
Florence Eleanor Fryhofer,	Randolph, Riley.
George William Fryhofer,	Randolph, Riley.
Waldo Parkhurst Gahan,	Manhattan, Riley.
Isaac Clayton Gall,	Burlington, Osage.
Ernest A. Gardiner,	Bradford, Wabaunsee.
John Garrett,	Centropolis, Franklin.
Ernest W. Gilkerson,	Willard, Shawnee.
Harvey G. Gilkerson,	Willard, Shawnee.
Edward William Marble Ginter,	Waldron, *Missouri.*
Garrett Walter Ginter,	Valley Falls, Jefferson.
Charles Shepard Green,	Manhattan, Riley.
Oscar Hugo Halstead,	Leonardville, Riley.
Walter Harling,	Olesburg, Pottawatomie.
Hortensia Harman,	Valley Falls, Jefferson.
John Bright Harman,	Valley Falls, Jefferson.
Marie Haulenbeck,	Manhattan, Riley.
Philip Hay,	Junction City, Geary.
Blanche Etta Hayes,	Manhattan, Riley.
Lorena Marguerite Helder,	Manhattan, Riley.
Everett Lewis Higinbotham,	Myers Valley, Pottawatomie.
Albert David Holmes,	Gaylord, Smith.
Mrs. Clara Effie Holroyd,	Manhattan, Riley.
Clarence V. Holsinger,	Rosedale, Wyandotte.
Alice C. Hood,	Manhattan, Riley.
Albert Stephen Houghton,	Manhattan, Riley.
Jessie Stingley Hunter,	Manhattan, Riley.
Henry Dallas Huxley,	Princeton, Franklin.
Frank William Irvin,	Manhattan, Riley.
Andrew Jackson,	Lincoln, Lincoln.
Abram Johnson,	Melvern, Osage.
John James Johnson, jr.,	Success, Russell.
Fred Ralph Jolly,	Atwood, Rawlins.
Isaac Jones, jr.,	Ada, Lincoln.
William Irvin Joss,	Fairview, Brown.
Peter Guin Keele,	Manhattan, Riley.
Stella Victoria Kimball,	Manhattan, Riley.
James Sproat Lamm,	Lansing, Leavenworth.
Alfred Lawson,	Edmond, Norton.
Eugene Marshall,	Manhattan, Riley.
Hugh W. Mattoon,	Topeka, Shawnee.
Charles Dwin McCauley,	Wilburn, Ford.

Names.	*Post Office and County.*
Laura Sarah McKeen,	Russell, Russell.
Ward Cadwell Mead,	Maple City, Geary.
Elizabeth Ida Meyers,	Manhattan, Riley.
Scott Roscoe Moore,	Holton, Jackson.
Elizabeth Morrison,	Arispie, Pottawatomie.
George Thorp Morrison,	Arispie, Pottawatomie.
Theo Wattles Morse,	Mound City, Linn.
Josie M. Myers,	Ogden, Riley.
Carlos Thomas Newby,	Tonganoxie, Leavenworth.
Oscar Albert Otten,	Brenner, Doniphan.
Pearl Hiram Pagett,	Beloit, Mitchell.
Ida Rebecca Pape,	Topeka, Shawnee.
Charles Randolph Pearson,	Collyer, Trego.
James Henry Persinger,	Canton, McPherson.
Edward Leon Platt,	Manhattan, Riley.
Horace Greeley Pope,	Cawker City, Mitchell.
Winnie Luella Romick,	Manhattan, Riley.
William Walter Robison,	Yates Center, Woodson.
Victor Irvin Sandt,	Alden, Rice.
John Alfred Scheel,	Emporia, Lyon.
Jacob Ulrich Secrest,	Randolph, Riley.
Jennie May Selby,	Manhattan, Riley.
Mabel Gertrude Selby,	Manhattan, Riley.
Annie Maud Shipman,	Elmdale, Chase.
Richard Simmons,	Cora, Smith.
Charles Chrisfield Smith,	Manhattan, Riley.
Thomas H. Smyth,	Beloit, Mitchell.
John Speidel,	Poast Town, *Ohio.*
Ida May Staver,	Dallas, *Missouri.*
Maggie Jane Steuart,	Winchester, Jefferson.
William Henry Steuart,	Winchester, Jefferson.
Fairy Josephine Strong,	Manhattan, Riley.
Cora Adella Stump,	Corning, Nemaha.
Emma Catherine Stump,	Corning, Nemaha.
Franklin Albert Thackrey,	Manhattan, Riley.
Delbert Timbers,	Beloit, Mitchell.
John Malcolm Todd,	Marmaton, Bourbon.
Samuel R. Vincent,	Argonia, Sumner.
Ellsworth Giles Voiles,	Manhattan, Riley.
Edgar Isaac Washington,	Manhattan, Riley.
Porter E. Westgate,	Manhattan, Riley.
Hannah Amelia Wetzig,	Winkler's Mills, Riley.
Myrtle Caroline Whaley,	Manhattan, Riley.
George Carpenter Wheeler,	Burlington, Coffey.
Jessamine Whitford,	Manhattan, Riley.
Jessie C. Whitney,	Manhattan, Riley.

Names.	*Post Office and County.*
Mary Elizabeth Willard,	Wamego, Pottawatomie.
John Melancthon Williams,	Edgerton, Johnson.
Hattie Ethel Yenawine,	Manhattan, Riley.

FIRST YEAR.

Charles Eckley Abell,	Leonardville, Riley.
Emma Elizabeth Adams,	Manhattan, Riley.
David Ewing Ainsworth,	Ocheltree, Johnson.
Flora Evelina Allingham,	Manhattan, Riley.
Deane Collier Arnold,	Louisville, Pottawatomie.
William Thomas Attwood,	Fact, Clay.
William Henry Austin,	Garden Plain, Sedgwick.
Walker Humphrey Baker,	Manhattan, Riley.
Miriam Ballard,	Ballard's Falls, Washington.
Andrew Monrow Barnard,	Manhattan, Riley.
Asa William Barnard,	Manhattan, Riley.
Clyde William Barnes,	Burlingame, Osage.
Robert John Barnett,	Denison, Jackson.
Pearl Bartlett,	Poe, Ottawa.
George Llewellyn Baughman,	Topeka, Shawnee.
Henry Baughn,	Netawaka, Jackson.
Ada Mae Baxter,	Myers Valley, Pottawatomie.
Agnes Baxter,	Myers Valley, Pottawatomie.
Franklin Fairbanks Baxter,	Manhattan, Riley.
James Cameron Bayless,	Melvern, Osage.
Carrie Amelia Beatty,	Leavenworth, Leavenworth.
Herbert John Bender,	Topeka, Shawnee.
Rubert Bender,	Topeka, Shawnee.
Arthur Denman Benson,	Colfax, *Illinois.*
Carl Julius Berglund,	Lindsborg, McPherson.
Ernest W. Bidwell,	Agra, Phillips.
William A. Biegert,	Junction City, Geary.
Marie Blachly,	Leonardville, Riley.
William Keller Blachly,	Leonardville, Riley.
Augusta Blockolsky,	Myers Valley, Pottawatomie.
Jessie Lucy Boardman,	Centralia, Nemaha.
Alie Robert Bradshaw,	Hoyt, Jackson.
Criss Corbet Braum,	Denison, Jackson.
John Henderson Braum,	Denison, Jackson.
Fred Broadbent,	Erie, Neosho.
Rosa Selena Broadbent,	Corning, Nemaha.
Homer Ulysses Brookhart,	Nelson, *Nebraska.*
Albert Leo Brooks,	Salina, Saline.
Bert Mills Brown,	Fall River, Greenwood.

Names.	*Post Office and County.*
Charles Curtis Brown,	Stuyvesant, Osborne.
William Edward Bryan,	Centralia, Nemaha.
Con Morrison Buck,	Oskaloosa, Jefferson.
Elvina Buckman,	Topeka, Shawnee.
Walter Emmet Butler,	Pueblo, *Colorado.*
Clyde Farley Caldwell,	Scandia, Republic.
James Marion Calhoun,	New Murdock, Kingman.
Plummer Carnahan,	Centralia, Nemaha.
Samuel Mordecai Carnahan,	Stockdale, Pottawatomie.
Samuel Stearson Cassidy,	Beattie, Marshall.
William Annesley Cavenaugh,	Ft. Supply, *Indian Territory.*
Marshall Chandler,	Argentine, Wyandotte.
Ona Devillow Chandler,	Burlingame, Osage.
Tom Charles,	Republic, Republic.
Tudor John Charles,	Republic, Republic.
Ernest Gardner Clark,	Garden Plain. Sedgwick.
William Arthur Coe,	Coloma, Woodson.
Chase Cole,	Winchester, Jefferson.
Harry Leonard Coleman,	Menoken, Shawnee.
Fred Collett,	Elk, Chase.
Thomas Henry Coman,	Scammonville, Cherokee.
Laura Viola Condray,	Manhattan, Riley.
Burton Wesley Conrad,	Capioma, Nemaha.
Creed Conwell,	Manhattan, Riley.
Hallie Adams Cowles,	Sibley, Douglas.
Julia Craig,	Fairport, Russell.
Gilbert Crawford,	Paola, Miami.
Sid Henry Creager,	Jamestown, Republic.
George Walter Crouch,	Maple Hill, Wabaunsee.
Seth Curtis,	Oregon, *Missouri.*
Alexis Craine Cutler,	Wabaunsee, Wabaunsee.
Fred Hurlbut Danvers,	North Topeka, Shawnee.
Frank Andrew Dawley,	Vincent, Osborne.
Mrs. Dora Ann Dawson,	Yates Center, Woodson.
Flora Day,	Onaga, Pottawatomie.
George Adam Dean,	Topeka, Shawnee.
Charles Sumner Dearborn,	Silver Lake, Shawnee.
Miles Cullen Doran,	Edgerton, Johnson.
Fred George Dow,	Manhattan, Riley.
Carrie Isabell Drake,	Manhattan, Riley.
Olive May Drake,	Manhattan, Riley.
Raymond Dull,	Burlington, Coffey.
Marshall Columbus Edwards,	Vinton, Cowley.
Edwin Amos Eggleston,	Kingman, Kingman.
Charles Silas Evans,	Denison, Jackson.
Clyde Farman,	Manhattan, Riley.

Names.	*Post Office and County.*
Robert Kilby Farrar,	Axtell, Marshall.
Herbert Newton Farris,	Longton, Elk.
Jesse Martain Fengel,	Woodbine, Dickinson.
Frank Johnson Fields,	Harveyville, Wabaunsee.
Marquis C. Findley,	Morland, Graham.
Mary Loretta Findley,	Morland, Graham.
Walter Scott Forsythe,	Carbondale, Osage.
Rosa Ida Francis,	St. Clere, Pottawatomie.
Ernest Harrison Freeman,	North Topeka, Shawnee.
Joanna Freeman,	Manhattan, Riley.
Fred Frevert,	Piqua, Woodson.
Howard Shearer Fritz,	Newton, Harvey.
Arthur Lorenzo Frowe,	Louisville, Pottawatomie.
Elmer George Gibson,	Willard, Shawnee.
Morris Hooper Ginter,	Valley Falls, Jefferson.
John C. Goss,	Lansing, Leavenworth.
William L. Graves,	Inman, McPherson.
Ola Emery Grecian,	Alton, Osborne.
Bert Waldron Green,	Manhattan, Riley.
Charles D. Griffee,	Alden, Rice.
Bertha Annie Gundaker,	Manhattan, Riley.
Fred Harvey Haid,	Myers Valley, Pottawatomie.
Joseph Haldeman,	Jasper, McPherson.
Benjamin De Witt Haller,	Burlingame, Osage.
Ellen Aurora Halstead,	Leonardville, Riley.
Lloyd Hamill,	Olathe, Johnson.
Maria Glen Hanlin,	Osborne, *Missouri.*
Samuel McCreedy Hanlon,	Orie, Sumner.
William Lesley Hanlon,	Orie, Sumner.
Gertrude Hardy,	Manhattan, Riley.
Llewellyn Hardy,	Manhattan, Riley.
Walter Eugene Hardy,	Manhattan, Riley.
Myrtle Mary Harner,	Leonardville, Riley.
Samuel Stook Harner,	Leonardville, Riley.
Arlow Harper,	Melvern, Osage.
Helen Harrison,	Manhattan, Riley.
Elizabeth Lynn Hartley,	Manhattan, Riley.
Ephraim J. Hartzler,	Goodland, Sherman.
Gertrude Evangeline Haulenbeck,	Manhattan, Riley.
Alonzo Charles Havens,	Dwight, Morris.
Gertrude Julia Havens,	Dwight, Morris.
Lawrence Wilber Hayes,	Manhattan, Riley.
William Alfred Hayward,	Manhattan, Riley.
Winfred Francis Hecox,	La Junta, *Colorado.*
Jonas August Heim,	Dawson, *Nebraska.*
Abraham Hudson Hepler,	Manhattan, Riley.

Names.	*Post Office and County.*
Clarence Hepler,	Manhattan, Riley.
Forrest Hill,	Emporia, Lyon.
Samuel Vincent Henry Hogbin,	Eskridge, Wabaunsee.
Eugene Fayette Holden,	Overbrook, Osage.
Curtis Edson Holderman,	Chetopa, Labette.
Louis Pettigrew Holland,	Garden Plain, Sedgwick.
George Ralph Hopkins,	Garnett, Anderson.
Alice Horton,	Manhattan, Riley.
Sara Hayden Hosmer,	Eskridge, Wabaunsee.
Alda Howell,	Manhattan, Riley.
Olga D. Huber,	Meriden, Jefferson.
Charles Gibson Huey,	Downs, Osborne.
Guy Dudley Hulett,	Edgerton, Johnson.
Cyrus Eugene Humphrey,	Leeds, Chautauqua.
Dell E. Humphrey,	Manhattan, Riley.
John L. Hunter,	Manhattan, Riley.
Clarence Wilmot Jenkins,	Albuquerque, *New Mexico.*
William John Jennings,	Manhattan, Riley.
Willie Eber Jobes,	Tecumseh, *Nebraska.*
Carrie Grace Johnson,	Myers Valley, Pottawatomie.
Christian Andrick Johnson,	Success, Russell.
Jesse R. Johnson,	Myers Valley, Pottawatomie.
John Williamson Johnson,	Myers Valley, Pottawatomie.
Susan Effie Johnson,	Success, Russell.
Marian Elizabeth Jones,	Manhattan, Riley.
Tom Lormar Jones,	Manhattan, Riley.
Olive Jane Kearns,	Manhattan, Riley.
Lewis Keeler,	Ravanna, Garfield.
Rosella Kelly,	Ogden, Riley.
Maud Estella Kennett,	Silver Lake, Shawnee.
Charles Nash Kenyon,	Cawker City, Mitchell.
Richard Beaver Kerr,	Salina, Saline.
John Ben Kimball,	Manhattan, Riley.
John Milton Kimball,	Manhattan, Riley.
Fred Linton Kinsey,	Crow, Phillips.
Mark Kirkpatrick,	Fredonia, Wilson.
Charles Rolland Kistler,	Waterville, Marshall.
Ambrose W. Krotzer,	Manhattan, Riley.
John Ester Kumle,	Sharp's Creek, McPherson.
William Frederick Lachenmaier,	Ames, Cloud.
Charles Alfred Lafferty,	Olivet, Osage.
Daniel Seward LaShelle,	Chepstow, Washington.
Kate Law,	Brownell, Ness.
Perry Law,	Brownell, Ness.
Frank Thomas Lawry,	Overbrook, Osage.
Alta Westfall Lee,	Russell, Russell.

Names.	*Post Office and County.*
Calvin Harvey Leonard,	Lebo, Coffey.
Cortes Dawson Lesley,	Culver, Ottawa.
John William Lewis,	Moline, Elk.
Leo Clayton Lewis,	Harveyville, Wabaunsee.
Myron Arthur Limbocker,	Manhattan, Riley.
Scott Long,	Manhattan, Riley.
Selma Daisy Deborah Lund,	Randolph, Riley.
Charles W. Lyman,	Manhattan, Riley.
Mary Louise Maas,	Alma, Wabaunsee.
Inez Louise Mack,	Red Creek, *New York.*
George Dodds Martin,	Eskridge, Wabaunsee.
Janna Mary Martin,	Eskridge, Wabaunsee.
Charles Matter,	Manhattan, Riley.
Cora Luella Matthews,	Irving, Marshall.
Cecil Eugene Matthews,	Irving, Marshall.
Irwin L. McCarty,	Conway, McPherson.
William Bogart McCord,	Manhattan, Riley.
Martha M. McCullough,	Delavan, Morris.
Nannie Catharine McCullough,	Delavan, Morris.
Samuel Alexander McDowell,	Manhattan, Riley.
Charles Irving McGregor,	Olivet, Osage.
George Vernon McKeever,	Valley Falls, Jefferson.
William Dio McPhee,	Anthony, Harper.
Ward Cadwell Mead,	Maple City, Cowley.
Winfred Medaris,	Manhattan, Riley.
James Edward Mercer,	Topeka, Shawnee.
Harvey Robert Miller,	Wabaunsee, Wabaunsee.
John Mitchell,	North Topeka, Shawnee.
Mary Ettie Mitchell,	Burlingame, Osage.
Oliver L. Mitchell,	Groveland, McPherson.
Stewart Mitchell,	Burlingame, Osage.
William Henry Mitchell,	Melvern, Osage.
Julius Frederick Moerer,	Piqua, Woodson.
Minnie Minerva Moffett,	Manhattan, Riley.
Alida Ellen Moody,	Rexford, Thomas.
Almira Ettie Moody,	Rexford, Thomas.
Enoch K. Moody,	Stuart, Smith.
Daniel Estol Moore,	Manhattan, Riley.
Charles Milton Morgan,	Keats, Riley.
Frank Herbert Morgan,	Keats, Riley.
Debbie Lenora Mosher,	Haddam, Washington.
George Merrick Munger,	Eureka, Greenwood.
Clarence Lea Myers,	Holton, Jackson.
Maude Anna Naylor,	Alta Vista, Wabaunsee.
Laura Maude Neblock,	Harveyville, Wabaunsee.
Stephen Needham,	Lane, Franklin.

Names.	*Post Office and County.*
Hans Peter Nielson,	Denmark, Lincoln.
Cora Noel,	Valencia, Shawnee.
Cecil William Noel,	Valencia, Shawnee.
Ellen Elizabeth Norton,	Manhattan, Riley.
John Bitting Smith Norton,	Manhattan, Riley.
Mary Augusta Norton,	Manhattan, Riley.
Elmer Nutting,	Ames, Cloud.
William Dalrymple Oakford,	Fredonia, Wilson.
Lillian Oldham,	Keats, Riley.
William Hackworth Painter,	Meade, Meade.
Elva Luthera Palmer,	Clifton, Clay.
Inez Luella Palmer,	Clifton, Clay.
Mabel Palmer,	Burlingame, Osage.
Nellie M. Palmer,	Burlingame, Osage.
Ethel Patten,	Silver Lake, Shawnee.
John Vernon Patten,	Silver Lake, Shawnee.
Clarence Herbert Paul,	Waterville, Marshall.
Campbell Kenedy Peck.	Junction City, Geary.
Russell John Peck,	Big Valley, *Texas.*
Clara Jane Pender,	Pueblo, *Colorado.*
Hans Christian Peterson,	Greenleaf, Washington.
Jay Phelps,	McDonald, Rawlins.
Alexander Calvin Pike,	Westmoreland,Pottawatomie.
Emma Dell Pike,	Westmoreland,Pottawatomie.
Lotty Pishney,	Cleburne, Riley.
George Allan Plasket,	Claflin, Barton.
Mamie E. Polson,	Winkler's Mills, Riley.
John Poole,	Briggs, Geary.
Charles Stephens Pope,	Cawker City, Mitchell.
Ernest Poston,	Netawaka, Jackson.
Edgar Arthur Powell,	Osage City, Osage.
John Purcell,	Manhattan, Riley.
Lisle Willits Pursel,	Manhattan, Riley.
Florence Amelia Quantic,	Keats, Riley.
Alice Julia Quintard,	Silver Lake, Shawnee.
Maude Myrtle Quintard,	Silver Lake, Shawnee.
Ralph Waldo Rader,	Manhattan, Riley.
Clara Belle Ramsey,	St. Mary's, Pottawatomie.
Florence Rasmussen,	Manhattan, Riley.
Charles Duncan Rees,	Delphos, Ottawa.
Jesse Howard Rhoades,	Gardner, Johnson.
William Joseph Rhoades,	Gardner, Johnson.
James Atkinson Rich,	Ellis, Trego.
Ambrose Elliot Ridenour,	Formoso, Jewell.
William Samuel Robb,	Scottsville, Mitchell.
Alonzo Wellington Roe,	Dorrance, Russell.

Names.	*Post Office and County.*
Pearl Albro Rogers,	Burlingame, Osage.
Jennie Myrtle Romick,	Manhattan, Riley.
Fred Rowland,	Eskridge, Wabaunsee.
Beulah Melvin Royce,	Carleton, Dickinson.
Benjamin Franklin Simeon Royer,	Sterling, Rice.
Edward Sandell,	Manhattan, Riley.
Frederick William Schaeber,	Oak Hill, Clay.
Eugene E. Schmitz,	Alma, Wabaunsee.
Ulysses Allison Screechfield,	Minneapolis, Ottawa.
Ernest Schubert,	Centralia, Nemaha.
Augusta Alvine Wilhelmine Schuneman,	Burzen, *Germany.*
Rosa Alice Sealock,	Twelvemile, Smith.
James Marshall Shearer,	Frankfort, Marshall.
Alice Myrtle Shofe,	Manhattan, Riley.
Gertrude Werden Shofe,	Manhattan, Riley.
Charles Ellsworth Shoup,	Russell, Russell.
Charles Wesley Shull,	Manhattan, Riley.
Emma Almira Shull,	Manhattan, Riley.
Corodan Allen Sigman,	Manhattan, Riley.
George William Simms,	New Helena, *Nebraska.*
Fred Smiley,	Tecumseh, *Nebraska.*
Etta Smith,	Manhattan, Riley.
Frederick John Smith,	Iwacura, Clay.
George William Smith,	Mankato, Jewell.
Kitty Myrtle Smith,	Manhattan, Riley.
William Alfred Smith,	Bonfield, *Illinois.*
Carl Snyder,	Oskaloosa, Jefferson.
Bertha Julia Spohr,	Manhattan, Riley.
Edith Stafford,	Leonardville, Riley.
Bertha Anora Steele,	Minneapolis, Ottawa.
Mary Letha Steele,	Junction City, Geary.
Joseph Stephens,	Willard, Shawnee.
Nellie Gertrude Stewart,	Olsburg, Pottawatomie.
Anna Louise Stingley,	Manhattan, Riley.
Sadie Stingley,	Manhattan, Riley.
Charles Harrison Stokely,	Burlingame, Osage.
Miriam Esther Swingle,	Manhattan, Riley.
Eli Joseph Thompson,	Haviland, Kiowa.
Elmer Thomas Thompson,	Smith Center, Smith.
Louis James Thompson,	Garden Plain, Sedgwick.
Nelle B. Thompson,	Wamego, Pottawatomie.
William Mathew Towers,	Manhattan, Riley.
Charles Clifford Towner,	Fall River, Greenwood.
Wilbur Sewall Trader,	Manhattan, Riley.
Elven Creveling Trembly,	Council Grove, Morris.
Frank George Trzaskowsky,	Junction City, Geary.

Names.	*Post Office and County.*
Corinne Tucker,	Clinton, Douglas.
Ada Van Gaasbeck,	Alta Vista, Wabaunsee.
Hattie Van Gaasbeck,	North Cedar, Jefferson.
Theodore Luther Velen,	Cleburne, Riley.
Olive Voiles,	Manhattan, Riley.
Hilda Germania Walters,	Manhattan, Riley.
Albert Murry Warner,	Topeka, Shawnee.
George Walter Washington,	Manhattan, Riley.
Ross Clark Wells,	Kansas City, *Missouri.*
Claude Ray West,	Columbus, Cherokee.
Ernest Louis Wetzig,	Winkler's Mills, Riley.
Ernest P. Whaley,	Millard, Barton.
Louise Clara Wiest,	Manhattan, Riley.
Christopher Wilson,	Glasco, Cloud.
Olive Mabel Wilson,	Austin, *Illinois.*
May Lizzie Winters,	St. Mary's, Pottawatomie.
Edgar R. Wood,	Rossville, Shawnee.
William Hollingsworth Wood,	Byron, *Nebraska.*
William Alexander Wright,	Denison, Jackson.
Ora Gertrude Yenawine,	Manhattan, Riley.
Charles D. Young,	Yates Center, Woodson.
Grace Ellen Ziegler,	Manhattan, Riley.

SUMMARY.

	Gentlemen.	*Ladies.*	*Total.*
Post-graduate	3	7	10
Fourth year	27	10	37
Third year	43	19	62
Second year	93	46	139
First year	236	100	336
Totals	402	182	584

From 77 counties of Kansas, 552.

From 14 other States, 32.

Applicants not enrolled, 29.

OBJECTS AND METHODS.

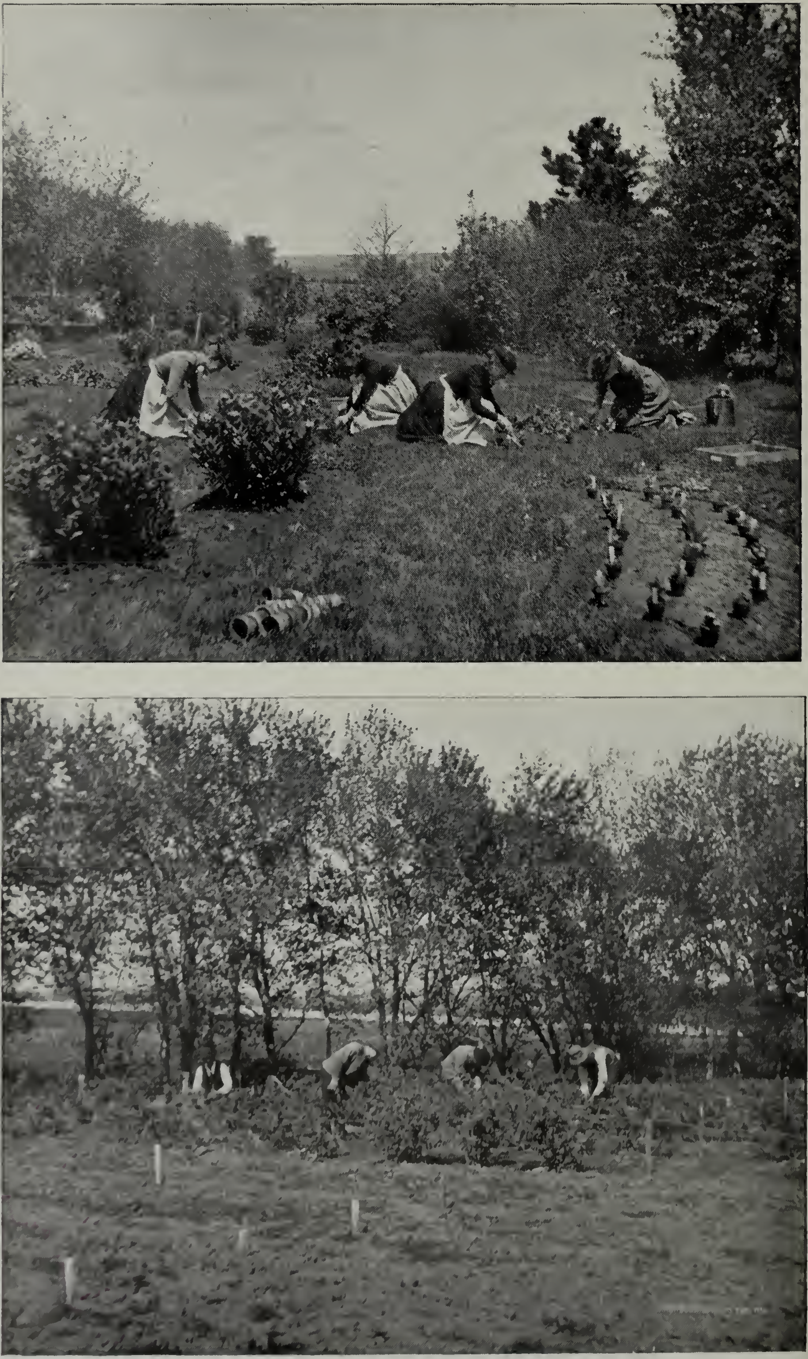
THE ENDOWMENT AND RESOURCES.

An act of Congress, approved July 2, 1862, gave to each State public lands to the amount of 30,000 acres for each of the Senators and Representatives in Congress according to the census of 1860, for the "endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Under this act the State of Kansas received 82,313.53 acres of land, and, in 1863, established the State Agricultural College, by endowing with these lands Bluemont College, which had been erected two miles from Manhattan, under the auspices of the M. E. Church, but was presented to the State for the purpose named in the act of Congress.

In 1873 the College was reorganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 215 acres, one mile from the city of Manhattan. On this fine location the State has erected buildings valued at $135,000, of which a description is given elsewhere. The farm and grounds, furniture, stock, and other illustrative apparatus, are valued at $150,000. The present value of buildings, grounds, apparatus, etc., is almost exactly equal to the sum of all appropriations by the State. All the lands have been sold, giving a fund of $502,927.35, which is by law invested in bonds, the interest alone being used for the current expenses of the College.

The annual income from the endowment fund—about $32,000—is supplemented by an appropriation under an act of Congress approved August 30, 1890, of $15,000 for 1890, $16,000 for 1891, $17,000 for 1892, and a sum increasing each year by $1,000 until the annual amount shall be $25,000. This fund is "to be applied only to instruction in agriculture, the mechanic arts, and the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." "No portion of said moneys shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings."



STUDENTS AT WORK IN THE GARDENS.

All expense of instruction is thus provided for, and the State is left to erect the necessary buildings and meet expenses in management of the funds.

Under an act of Congress approved March 7, 1887, the College receives, by general appropriation in Congress, $15,000 each year for the maintenance of an Experiment Station, "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The property of the Station, including a building erected especially for its use, amounts to more than $10,500.

OBJECTS.

This College now accomplishes the objects of its endowment in several ways:

First, it gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second, it teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, botany, entomology, zoölogy, and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science; and all are enforced by actual experiment.

Third, it trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household departments is made a part of a general education to usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth, it strives to increase our experimental knowledge of agriculture and horticulture. The provision for extensive and accurate researches, made by establishing the Experiment Station as a distinct department of the College, offers assurance of more definite results than can be obtained by ordinary methods. The Professors of Agriculture, Horticulture, Chemistry, Botany, and Veterinary Science, together with the President of the College, form the Experiment Station Council, by authority of which experiments are undertaken and carried on in the several departments, under the special supervision of the professors. These touch "the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

The bulletins of the Station, issued at least as often as once in three months, are sent, according to law, free of postage, to all newspapers in the State, and "to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." Correspondence with reference to bulletins and experiments is welcomed, and may be addressed to the several members of the Council.

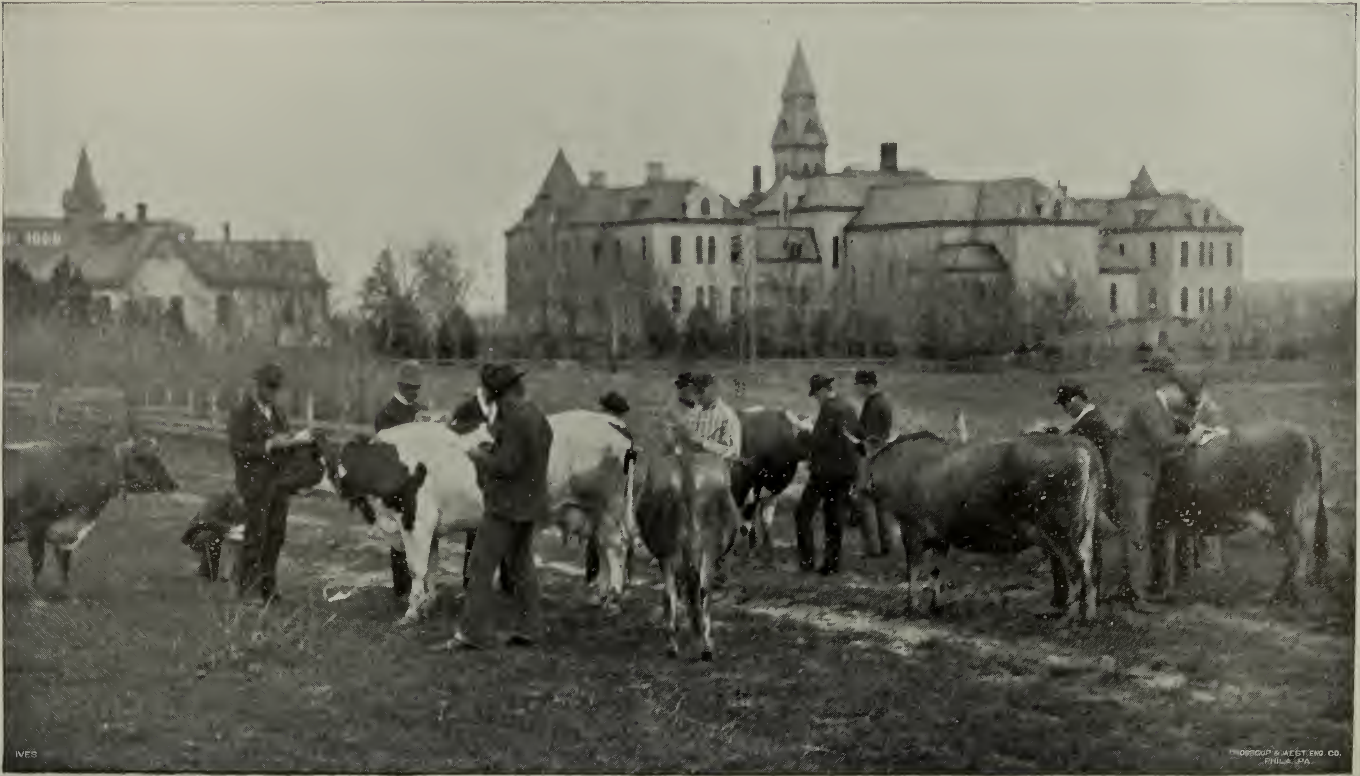
Fifth, it seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose it publishes the weekly *Industrialist.* Its officers also share in the debates and consultations of farmers and horticulturists throughout the State. Each winter a series of at least ten farmers' institutes is held in as many different counties of the State. In these the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers. These institutes, held for the past eleven years, have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented; and permanent organizations for the same purpose in many counties are increasing. Correspondence upon such questions is invited by all members of the Faculty, and applications for institutes are desired from all parts of the State.

COURSE OF STUDY.

The necessity for so adjusting various branches of a course of study that there shall be as little waste as possible in acquiring both information and discipline, is felt by every teacher. Such a course is not designed to be absolutely inflexible, but to guide the judgment into some definite line of progress from which no mere whim shall turn a student aside.

Each student is expected to take three studies, besides one hour's daily practice in an industrial art; and variations from this rule can be made only with the consent of the Faculty.

Parallel courses are offered to both sexes, with such differences as their necessities seem to call for. The following gives the general scope of the two, but fuller explanations are found under "Outline of Instruction:"


IVES
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STUDENTS JUDGING THE DAIRY CATTLE.

FIRST YEAR.

Fall Term.....Algebra.
English Analysis.
Geometrical Drawing.
Industrial.

Winter Term ..Algebra.
English Composition.
Book-keeping.
Free-hand Drawing three times a week.
Industrial.

Spring Term...Algebra.
English Structure.
Botany.
Industrial (Carpentry or Sewing).

SECOND YEAR.

Fall Term.....Geometry.
Elementary Chemistry.
Horticulture.
Industrial.

Winter Term ..Geometry completed, Projection Drawing.
Agriculture or Household Economy.
Organic Chemistry and Mineralogy.
Twelve Lectures in Military Science.
Industrial (Cooking).

Spring Term...Anatomy and Physiology.
Entomology.
Analytical Chemistry.
Twenty Lectures in Military Science.
Industrial (Farm and Garden or Dairy).

THIRD YEAR.

Fall Term.....Trigonometry and Surveying.
Agricultural Chemistry.
General History.
Industrial (Farm and Garden).

Winter Term ..Mechanics.
Constitutional History and Civil Government.
Rhetoric.
Industrial.

Spring Term...Civil Engineering or Hygiene.
Physics.
English Literature.
Perspective Drawing two hours a week; Drafting two hours.
Industrial.

FOURTH YEAR.

Fall Term.....Agriculture or Literature.
Physics and Meteorology.
Psychology.
Industrial.
Winter Term..Logic, Deductive and Inductive.
Zoölogy.
Structural Botany.
Veterinary Science or Floriculture.
Industrial.
Spring Term...Geology.
Political Economy.
An elective in Agriculture, Horticulture, Mechanics, or related sciences.
Industrial.

CLASS HOURS, 1892–'93.

	HRS.	FIRST YEAR.					SECOND YEAR.				THIRD YEAR.	FOURTH YEAR.
FALL TERM (14 weeks).	I.	Algebra.	English.	Algebra.	Industrial.	Drawing.	Horticulture.	Chemistry.	Geometry.	Industrial.	General History. Trig. and Surveying.	Agriculture. Literature.
	II.	English.	Algebra.	Industrial.	Drawing.	English.	Chemistry.	Horticulture.	Industrial.	Geometry.	Industrial. General History.	Psychology.
	III.	Drawing.	Industrial.		English.	Algebra.	Geometry.	Industrial.	Entomology.	Chemistry.	Trig. and Surveying. Physiology.	Physics. Industrial.
	IV.	Industrial.	Drawing.	English.	Algebra.	Drill and Rhetoricals.	Industrial.	Geometry.	Chemistry.	Entomology.	Physiology. Industrial.	Industrial. Physics.
	V.	Drill and Rhetoricals.	Drill and Rhetoricals.	Drawing.	Drill and Rhetoricals.	Industrial.	Chemical Practice, Drill, and Rhetoricals.				Surveying Practice. Drill.	Drill and Rhetoricals.
WINTER TERM (12 weeks).	I.	Drawing.	Book-keeping.	Industrial.	English Composition.	Algebra.	Agriculture.	Geometry. Drawing.	Household Economy.		Agricultural Chemistry.	Zoölogy.
	II.	Book-keeping.	Industrial.	English Composition.	Algebra.	Drawing.	Or. Chemistry. Blow-pipe.	Agriculture.	Blow-pipe. Or. Chemistry.	Drawing. Geometry.	Industrial. Mechanics.	Botany. Industrial.
	III.	Industrial.	English Structure.	Algebra.	Drawing.	Book-keeping.	Industrial.	Or Chemistry. Blow-pipe.	Industrial.	Blow-pipe. Or. Chemistry.	Mechanics. Rhetoric.	Logic.
	IV.	English.	Algebra.	Drawing and Drill.	Book-keeping.	English Structure.	Drawing. Geometry.	Industrial. Mineralogy.	Geometry. Drawing.	Mineralogy. Industrial.	Rhetoric. Industrial.	Floriculture. Veteriuary.
	V.	Algebra.	Drawing and Drill.	Book-keeping.	Industrial.	Industrial.	Milit'ry Science. Mineralogy.	Milit'ry Science. Industrial.	Mineralogy. Milit'ry Science.	Industrial. Milit'ry Science.	Drill and Rhetoricals.	Industrial. Botany.
SPRING TERM (11 weeks).	I.	Drawing.	Algebra.	Botany.	Industrial.	English Structure.	Entomology.	Physiology.	Analytical Chemistry.		English Literature.	Political Economy.
	II.	Arithmetic.	Botany.	Industrial.	English Structure.	Algebra.	Physiology.	Entomology.			Engineering. Hygiene.	U. S. Constitution.
	III.	U.S. History. Book-keep'g.	Industrial.	English Composition.	Algebra.	Botany.	Analytical Chemistry.		Horticulture.	Physiology.	Physics. Industrial.	Geology.
	IV.	English.	English Composition.	Algebra.	Botany.	Industrial.			Physiology.	Horticulture.	Industrial. Physics.	Industrial.
	V.	Geography.	Drill and Rhetoricals.				Military Science, Drill, Rhetoricals, and Dairying.				Drawing. Rhetoricals.	Rhetoricals.

Industrial Training.—Closely adjusted to the course of study is Industrial Training in several of the arts, to which each student is required to devote at least one hour a day. Among the lines of training each student may select, with the approval of the Faculty, except in terms when special industrials are required. Young men may have farming, gardening and fruit-growing, wood-work and iron-work, or printing. Young women may take cooking, sewing, printing, floriculture, or music.

All young men must have their industrials for one term in the carpenter shop before completing the first year; and during the spring term of the second year and the fall term of the third year, upon the farm, garden, and orchards. Young women take their industrial for one term of the first year in sewing, and for the winter and spring terms of the second year in the kitchen laboratory and dairy.

The Daily Routine requires chapel at 8:30 A. M., and classes from 8:50 A. M. to 1 P. M., as shown under "Class Hours." Class rhetorical exercises are held weekly. Military drill is twice a week. On every Friday afternoon, at 1:30, all attend the public lecture or rhetorical exercises in chapel.

Special Courses.—Persons of suitable age or advancement who desire to pursue such branches of study as are most directly related to agriculture or other industries may select such studies under the advice of the Faculty. Assaying may be provided for by special arrangement, when students are qualified to pursue it.

Post-Graduate Courses.—Arrangements can be made for advanced study in the several departments at any time, and outlines of courses will be furnished on application. Special opportunities for investigation and research will be afforded at all times to resident graduates in agriculture and agricultural chemistry, physics and chemistry, horticulture and botany, zoölogy and entomology, mathematics, engineering, and drafting. Every facility for advancement in the several arts taught at the College will be given such students, though they are not required to pursue industrial training while in these courses.

Degrees.—The degree of BACHELOR OF SCIENCE is conferred upon students who complete the full course of four years and sustain all the examinations.

The degree of MASTER OF SCIENCE is conferred in course upon graduates who comply with the following conditions:

1. Each candidate shall furnish evidence satisfactory to the Faculty of proficiency in at least one of each of the groups of arts and science here named:

ARTS.	SCIENCES.
Agriculture.	Botany.
Horticulture.	Chemistry.
Engineering.	Zoölogy.
Architecture and Designing.	Entomology.
Domestic Economy.	Physics.

A PORTION OF THE COLLEGE HERD.

2. Each candidate must present for consideration by the Faculty a satisfactory thesis, involving original researches in line with one or the other of the courses pursued as above, and shall deposit a perfect copy in the College library.

3. Application to the Faculty for sanction of the lines of study and research selected should be made as early as the first day of November, and the subject of the thesis must be settled upon as soon as the first day of January preceding the Commencement at which the degree is expected.

4. Candidates must be from graduates of three or more years' standing, unless a post-graduate course of one year or more has been pursued at this College, in which case the second degree may be conferred two years after graduation.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of MASTER OF SCIENCE may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the Master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

2. His post-graduate study shall have been in line with that required of graduates of this College, as published in our Catalogue.

3. He must make application for the degree on or before the first day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1 an abstract of the thesis must be submitted to the Faculty.

5. Before May 15 the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

OUTLINE OF INSTRUCTION.

Agriculture.—*Second Year.*—History of Agriculture, showing the successive steps by which the art has attained its present position. History and characteristics of breeds: Their adaptation to the varying conditions of soil, climate, and situation; study of the forms of animals, as shown by the different breeds belonging to the College; the relation of stock-raising to general farming. Cultivation of hoed crops; management of corn and roots with reference to stock-feeding, and the growth of the finer grains. The growth of the tame grasses, in Kansas: The best sorts for the State, and their management, as shown by experience upon the College farm and elsewhere. Implements of simple tillage: Mechanical principles involved in their construction. Application of labor. Draught: Different adjustments as affecting draught. Plows for soil and subsoil. Drainage: Soils that need drainage; how to lay out a system of drains.

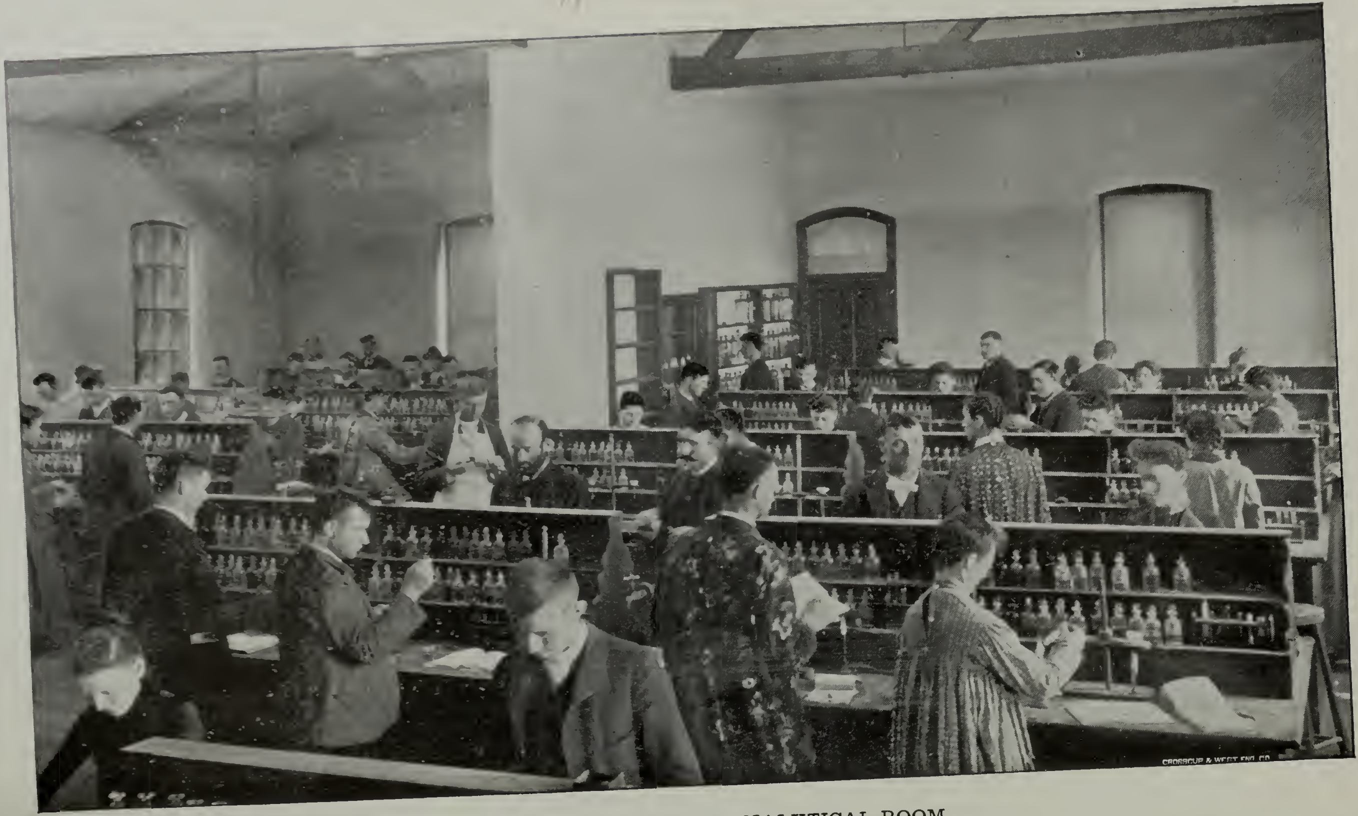
Fourth Year.—General principles governing the development of domestic animals: The laws of hereditary disease—of normal, abnormal and acquired characters; atavism; correlation in the development of parts; in-and-in breeding and cross-breeding; influences affecting fecundity. The selection and arrangement of the farm with reference to the system to be pursued. Rotation of crops: General advantages of a rotation; the best rotation for the distribution of labor, production of manure, and extermination of weeds. Planning farm buildings—barns, piggeries, and stables. Manure: How best housed and applied; composting; commercial fertilizers. Agricultural experiments; field and feeding experiments. Stock-feeding and meat production: Stall-feeding; soiling.

Horticulture.—It is the aim to teach this art from a botanical basis. The student applies his knowledge of the prime facts in botanical physiology to the various operations of the nursery, orchard, and farm. Instruction is given by a series of lectures upon the following topics, among others: The scope of Horticulture. General principles of propagation—by buds, by seeds. Production of improved varieties—by careful selection of seeds, by interfertilization of known kinds. Perpetuation of valuable sorts of fruits by bud propagation—budding, grafting, layering, etc. The important points in nursery manipulation. The orchard: Conditions of site, soil, exposure, elevation; special treatment of different kinds of fruit trees; pruning; gathering and storing fruits. Small-fruit culture: List of varieties suitable for Kansas planting. Vegetable garden: Selection and preservation of seeds; planting and transplanting; the management and use of hot-bed and cold-frame. Forest plantations. Wind-breaks. Hedges. Trees and shrubs for ornamental planting.

In the winter term of the fourth year the young women study "Floriculture," the subject including general green-house management; the treatment of plants in window gardening, the growing of flowering plants in the open air, the destruction of plant pests, etc.; practice in the plant-houses alternating with lectures on these topics.

Entomology.—This science is studied with special reference to its economic relations with agriculture and horticulture. A brief course in the principles of classification is followed by a more extended study of the life-history of beneficial and injurious insects, and means for encouragement of the one and for control of the other.

The instruction is presented in the form of lectures. Illustrations are furnished from the individual collections of the students, and from the entomological collections belonging to the College. Charts and



CHEMICAL LABORATORY, ANALYTICAL ROOM.

drawings from nature are used to illustrate points of value in classification. The pocket lens used in botany is required in this study.

Botany.— During the College course two terms are given to the study of Botany.

Elementary Botany.— In the spring term of the first year the organs of plants are first studied, after which the minute anatomy is briefly considered. This is followed by a study of vegetable physiology.

The classification of plants, vegetable products and their uses, are other important topics of the course. During a part of the term a number of flowers are analyzed, and a few plants collected and prepared for the herbarium. Each student is required to provide himself with a pocket lens, under the direction of the professor in charge. Text-book, Gray's Lessons and Manual of Botany.

Advanced Botany.— In the winter term of the fourth year, the minute structure of plants, as well as vegetable physiology, is studied more fully. This includes an examination of the vegetable cell, its parts, modifications, and of tissue as presented in its various forms. This is made the basis for more detailed work on special subjects, among which may be mentioned germination, development of tissues, protoplasm, starch, parasitic fungi — especially the moulds, smuts, rusts, etc., and other cryptogamic plants. Each student has the use of a compound microscope, with the necessary tools and reagents. While this course is intended primarily to furnish a foundation for applied botany in horticulture and agriculture, it also affords, especially when taken a second term as an elective study, the advantages of systematic observation and original investigation. A good herbarium and a large greenhouse are drawn upon for material for study.

Chemistry.—Inorganic Chemistry, which occupies the fall term of the second year, includes a consideration of chemical action, with nomenclature and formulas, and a careful study of the history, manufacture, physical, chemical and physiological properties, tests and uses of the various elements and their compounds. While teaching the facts as such, it is the aim to give prominence to those which show relations and illustrate principles. Especial attention is given to those substances having extended application in the arts. In addition to the usual lecture-room experiments, the student repeats, as far as practicable, all this experimental work at his private work-table. Text-book, Remsen's Introduction to the Study of Chemistry.

Organic Chemistry comprises a six-weeks course of lectures upon the preparation and properties of those organic substances most useful to man.

In Chemical Analysis, each student has his stand in the qualitative laboratory, completely furnished with apparatus and chemicals for his own use. His work includes the analysis of more or less complex mixtures of chemicals, minerals, ores, soils, mineral waters, well-waters, etc. The time given to this work is two hours daily for 11 weeks.

Agricultural Chemistry.—This includes a thorough consideration of the application of chemical principles to the economy of the farm; the origin and formation of soils; the classification and composition of soils; the analysis of soils, and their adaptation to purposes of production; the composition and use of manures; composting; chemistry of farm operations—such as plowing, fallowing, draining; chemistry of plant-growth; the composition of grain and fodder plants, and their use and value as food; feeding; the chemistry of milk, butter, and cheese.

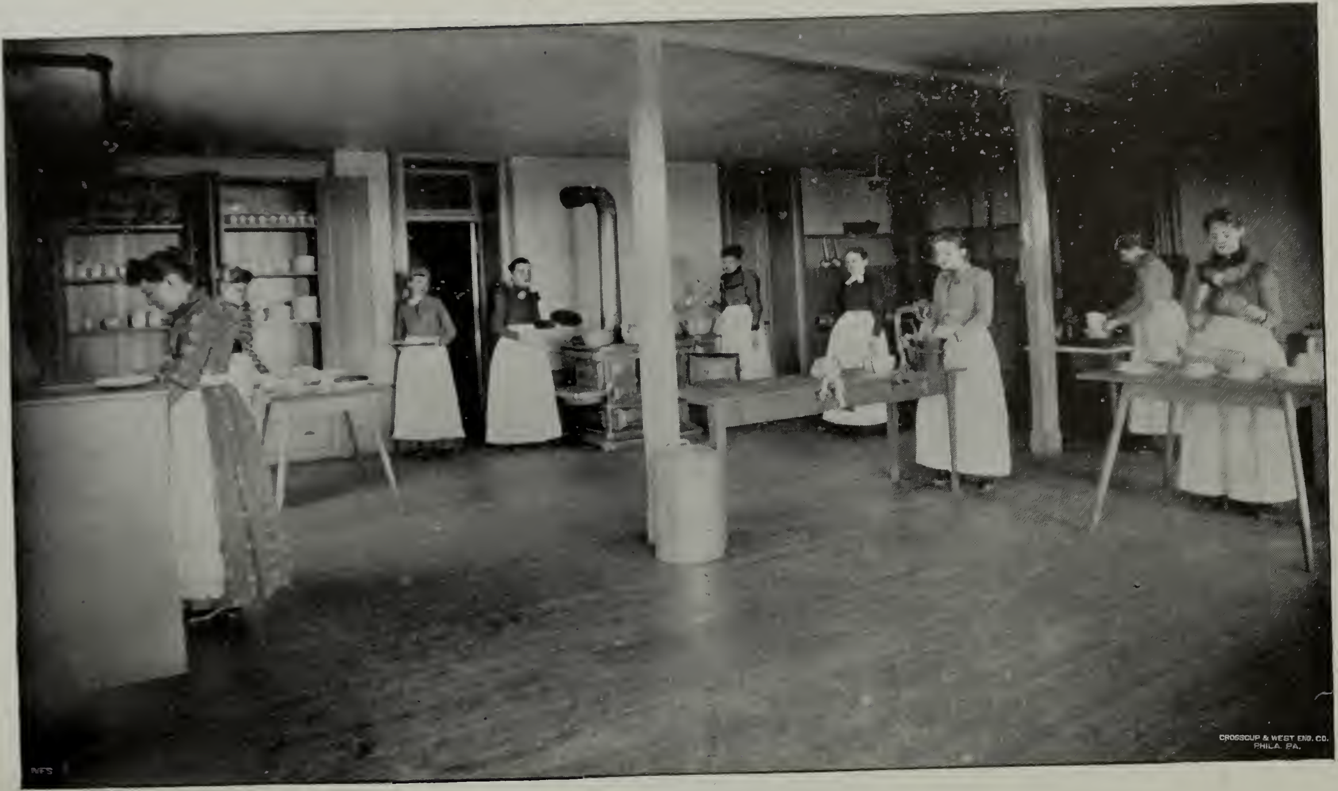
Mineralogy.—For six weeks in the second year, two hours a day are given to mineralogy. This includes the study of the properties, forms and uses of the principal minerals of the United States. Blowpipe analysis forms an important part of the course, each student being required to identify and name a large series of minerals. The pocket lens required in botany classes is used in this study. Text-book, Dana's Manual of Mineralogy and Petrography.

Geology.—This includes a general consideration of the earth's features, the constitution of rocks, and the arrangement of rock masses; the causes or origin of events in geological history; the order of succession in the strata of the earth's crust, and of the organisms that existed, and of the changes that were going on during the formation of each stratum. Prominence is given to facts having an economic bearing. The formation of soils and deposits of valuable minerals, especially in Kansas, are considered, and an excellent collection of geological specimens furnishes illustrations. LeConte's Compend of Geology is used as a text-book.

Anatomy and Physiology.—Human Anatomy is made the basis of a thorough study in physiology and hygiene. This includes such subjects as: Digestion and food; poisons and antidotes; circulation of the blood; respiration and ventilation; secretion and excretion; the nervous system; and the special senses. The course embraces, to some extent, comparative anatomy and physiology, affording preparation for the study of stock-breeding, zoölogy, and veterinary science. Martin's Human Body is used as a text-book. In connection with this study, dissecting is required.

Zoölogy.—In this study, Orton's Zoölogy has been adopted as the text-book. The intention of the course is to familiarize the student with the characters of some type in each class, and then, by comparative study, with the chief modifications of the type chosen. Especial attention is given to comparative anatomy and physiology. A good collection of animals, birds, reptiles, fishes, both mounted and alcoholic, a collection of invertebrates in alcohol, and a fine collection of conchological specimens, are among the means of illustration. Dissection and work with the microscope accompany the study.

Veterinary Science.—The 12-weeks course of lectures is adapted to wants of farmers and stockmen, and includes such topics as the fol-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KITCHEN LABORATORY

lowing: Diseases of bone and their treatment; diseases of the circulatory, respiratory and digestive systems, their causes, treatment, and prevention; surgical operations, wounds, and abscesses; difficult parturition; shoeing and lameness; veterinary dentistry; horse judging and examination for soundness; the principal medicines used in treating sick animals, and how to give them.

Lectures are illustrated by use of animals, skeletons, charts, and diseased specimens. Whenever practicable, operations are performed before the class, and students are requested to assist.

Special Hygiene.—To young women of the third year a course of daily lectures is given upon the laws of life and health. The course extends over a period of 10 weeks, and covers questions pertaining to personal health, and the health of the household — such as food, air, exercise, clothing, temperature of rooms, and care of sick-room.

Household Economy.—A series of lectures to young women of the second year continues through a term of 12 weeks. These cover the subjects of marketing, the chemistry of cooking, order, neatness and beauty in housekeeping, and comfort of a family. The class spends one hour each day in the kitchen laboratory, and cooking is done by each student.

Physics and Meteorology.—Two terms' work gives an opportunity for experimental study of the laws of sound, heat, light, electricity, and magnetism; the constitution of the atmosphere; the measurement of temperature and humidity; atmospheric pressure. Text-book, Atkinson's Ganot's Physics. This course also includes a careful study of instruments and methods employed in taking meteorological observations.

Book-keeping and Commercial Law.—Beginning with a simple cash account, Book-keeping is developed through all the principles of single- and double-entry. Considerable time is given to those forms best adapted to farm and business life. Each student provides a full set of blanks, and keeps a regular set of books, in which accuracy of calculation and posting, and neatness of execution, are just as essential as correct understanding of the principles. Text-book, Mayhew's Standard Book-keeping. In connection with the term's work in Book-keeping, a practical course in Commercial Law is given, including contracts, farm rights, negotiable paper, sales, real estate, partnership, bailment, common carriers, and business forms.

Algebra.— One year is given to the study of Algebra. In the first term, arithmetical processes are briefly reviewed and generalized by the use of negative numbers. The student is made familiar with algebraic notation, the primary processes, factoring, fractions, and the simple equation. In the second term, the equation in its various forms and applications, and the theory of exponents, are made the subjects for study. The third term is given to ratio, proportion, series, logarithms, and such other topics as are essential to success in every course in mathematics. Text-book, Wentworth's Higher Algebra.

Geometry.—In geometrical drawing of the first year, the student has already become familiar with geometrical forms, and the construction of figures representing them. Plane geometry is studied during the fall term of the second year. Half the winter term is then given to solid and spherical geometry. Throughout the course original demonstrations, and the solution of practical problems involving the theorems demonstrated, are required of the class.

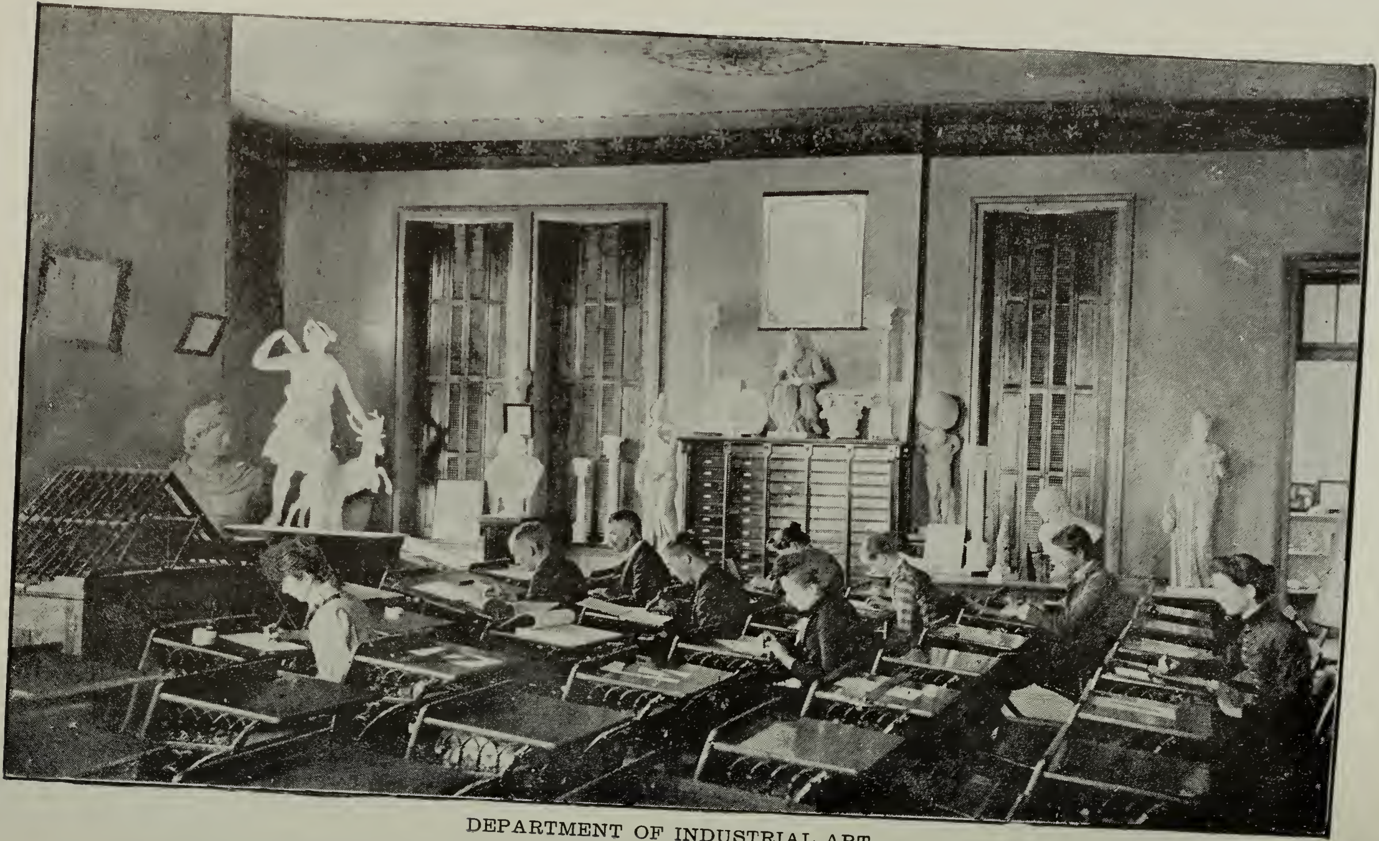
Trigonometry and Surveying.—All the essential principles of plane Trigonometry are carefully developed and thoroughly mastered. A short treatment of spherical trigonometry follows. Surveying includes: Theory, adjustment and use of instruments, platting, determination of areas, dividing land, U. S. Government surveys, triangulation, leveling, topographical surveying, and railroad surveying. Field practice with compass, transit, plane table and Y-level is required. A topographical map, the data for which are gathered during the fall term, is drawn by each student during the winter term. Text-book, Wentworth's Trigonometry and Surveying.

Mechanics and Engineering.—A careful consideration of the laws of motion and force, as exhibited in machines and various phenomena of nature, occupies a single term. Another term is given to lectures in elementary, mechanical and civil engineering, and to the study of proper materials for buildings, their construction and durability; forms of roofs and bridges; care and use of machinery; and roads and road-making. Drafting is an essential feature of the work. Haswell's Engineer's Hand-book is used in connection with lectures in Engineering.

Drawing.—This study is required in four terms, of which two are in the first, one in the second, and one in the third year.

First Term.—Daily lessons for 14 weeks. Definition and mensuration of geometrical magnitudes, construction of perpendiculars, parallels, angles, and polygons, the circle and its secant lines, the ellipse, the ovoid, the oval, the parabola, the hyperbola, and various geometrical ornaments; use of drawing board, T-square, and water-colors; conventional representation of building materials. The College furnishes drawing board, T-square, triangle, and water-colors, but each student is required to have a drawing pen and a pair of compasses with attachments.

Second Term.—Free-hand Drawing three hours a week for 12 weeks. The first half of the term is devoted to the study of principles of, and practice in, surface designing, after which drawing from the object is taken up. The models used are geometrical solids, and objects of utility and beauty whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distri-



DEPARTMENT OF INDUSTRIAL ART.

bution of light, shade, shadow, and the reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish. Walters's Free-hand Drawing Books 1 and 2 are used as text-books. Lectures on color, principles of design and history of ornamentation are occasionally given.

Third Term.—Mechanical Drawing, six weeks. Orthographic and oblique projection of the straight line and the circle; intersection of geometrical solids; construction and development of helices; principles of isometrical projection; principles of shades and shadows. Books 3 and 4 of Morse's Mechanical Drawing are used as text-books.

Fourth Term.—Mechanical Drawing four times a week for 10 weeks. Half of this time is given to architectural and machine drafting, and half to the study of linear perspective, comprising principles of parallel, angular and oblique perspective; the perspectives of vertical and horizontal cylinders, cylindric perspective, and perspective corrections; intersections of curved and plain surfaces in perspective; shadows in perspective; shaded perspectives. Books 5 and 6 of Morse's Mechanical Drawing are used as text-books.

During the winter term of the third year, each student is required to draw, color, ink and letter a map delineating the surveys made during the fall term.

Students who show special aptitude are encouraged to take Drawing as a fourth study during any part of the course, and given every opportunity to fit themselves for the drafting office or for special art schools. The instruction includes an extended course in free-hand drawing, shading, coloring, architectural and mechanical drawing, supplemented by a course of reading on art topics.

The graphic work of the different classes and special students is retained by the department for exhibition during Commencement, after which it is returned.

English Language and Literature.—Grammar is passed upon entrance, but the fall term of the first year is given to study of the origin and growth of the language, the analysis of sentence-making, and the discussion of idioms, difficult constructions, and parallel expressions, together with such contraction, transposition and transformation of sentences as will aid in securing variety in expression. The course will be essentially one of higher analysis. The winter term is given to the study and practice of composition. The spring term is given to English structure. Under this is included a careful study of words and their elements — roots, prefixes, and suffixes. The most fruitful primitives from the Saxon, Latin and Greek are learned, and also the laws governing the formation of derivatives. Lectures are given on the history and changes of words, and daily exercises are intended to teach careful discrimination in their use.

Third Year.— One term is given to the study of higher rhetoric, embracing the principles of clear explanation and convincing argument, as well as the outlines of sound criticism. This is followed by a term spent in the history of the English Language and Literature, with abundant illustrations from the best authors.

Students are led in this way to appreciate the power of our mother tongue, and at the same time to gain some acquaintance with the best thought of the world. Students are encouraged and directed in the use of the College library, and are under constant oversight in the expression of their thoughts in writing. Each class meets once a week for instruction and practice in elocution and composition. Original declamations, delivered before the students and Faculty, make a part of the drill in the higher classes.

In the course for young women, the first term of the fourth year gives training in the elements of criticism and good taste by a study of famous works in English and American literature.

Text-Books.—Swinton's Word Analysis, Welch's Composition, Genung's Rhetoric, Kellogg's English Literature.

History and Constitutional Law.—General History is studied during the fall term of the third year. The text-book, Sheldon's Studies in General History, is supplemented by lectures on the progress of civilization, and the philosophy of history. Considerable attention is given to the various forms of government. The chief object of the course is to teach the student how to study History, and he is constantly urged, therefore, to form his own conclusions from the facts presented.

The winter term of the third year is given to constitutional history and civil government. Every effort is made to avoid partisanship, and the students are encouraged to express their opinions freely. Johnson's The United States and Fiske's Civil Government are used as text-books, but considerable additional matter is given in lectures and much individual work required.

Political Economy.—The study of Political Economy, in a full term of the fourth year, gives a fair presentation of subjects connected with production, distribution and consumption of wealth. While the instruction is given by lectures, each student is expected to provide himself with some standard text-book for daily reference. Pains is taken to compare conflicting views, and point out sources of information on all sides of vexed questions, without bias or prejudice. Each student is required to present at some time during the term an original paper upon some topic assigned by the instructor.

Logic and Philosophy.—The art of reasoning correctly is aided by a study of systematic Logic, both deductive and inductive. Special prominence is given to methods for exact observation and experiment, and correct principles of classification. The previous researches and experience of the students are made to illustrate these principles. Text-book, Jevons-Hill, Elements of Logic.

A short course in psychology gives the general principles of intellectual and moral philosophy. Perception, understanding, memory, imagination, thought, feeling and volition are topics of explanation

CARPENTER SHOP.

and analysis. Theories of right and wrong and correct principles of action are made the means of a clear understanding of the nature of government in various forms, with special attention to individual rights and duties.

Industrial Arts.—The training in these departments is designed to be systematic and complete in each, so that the student following a single line diligently through the four-years course gains the essentials of a trade and a reasonable degree of skill. Those who wish only a general acquaintance with the arts can take shorter courses in several of them; but all are to select with a definite purpose. In the established course, young men are required to take the regular term in the carpenter shop, and on the farm and gardens, whatever the industrial chosen; young women are required to give one term to sewing, one to practice in the kitchen laboratory, and one in the dairy.

AGRICULTURE AND HORTICULTURE are required of young men as industrials during one term of the second year and one term of the third year. In these, practice is made to illustrate and emphasize the teaching, and cover essentially the same ground.

COOKING.—During the winter term, the young women who have lectures on household economy are required to cook one hour each day. They are taught various methods of making the substantial articles of food, as well as allowed to spend some time on the dainty dishes. During the term, they have practice in waiting on the table and in serving guests, thus putting the lectures into immediate practice.

During the fall term, any students who have passed the study of household economy may take cooking as an industrial, in which canning fruits, making preserves, jellies, pickles, mince-meat, desserts, cake and fancy breads form the principal part of the work.

DAIRYING.—During the spring term, daily instruction and practice in domestic dairying are given the young women of the second year by the instructor in household economy. Here the regular daily work is supplemented by a short course of lectures intended to explain the best practice in the arts of butter- and cheese-making, and to give the reasons therefor. The following topics cover, in the main, the instruction given the class: Influences affecting the quality and quantity of milk; butter-making; creameries; "deep" and "shallow" setting systems; packing and preserving butter; the household and factory systems of cheese-making.

CARPENTRY.—Wood-work is required of all young men during one term of the first year. In the first term's work a definite graded series of tasks is given in joining, work to dimensions, and simple problems in construction and turning, with the proper use and care of common bench tools, through which each student is advanced according to ability. Practice is given later in general wood-work, carpentry, cabinet-making, turning, and pattern-making; and the advanced students may have work suited to their chosen line, with special problems of construction, and special training in the use and care of fine tools, including saw filing. All work during industrial hours is laid out by the Superintendent, and belongs to the shop, except that fourth-year students are allowed to work from drawings of their own upon articles for their own use or profit. All students may be allowed the use of the shop outside of the practice hours for work of their own, under direction of the Superintendent.

A general course in iron-work includes graded work in blacksmithing, the management of the forge and hammer, drawing out, welding, forming, etc.; graded work in founding, covering, bench and floor moulding in iron and brass; also graded work in machine-shop practice, including bench and machine tool work, filing, chipping, laying out work, boring, turning and planing the metals.

SEWING.—One term of Sewing is required before the completion of the first year of study. During this term the work is carefully laid out by the Superintendent in a series of lessons, graded to the capabilities of each student. To more advanced students all ordinary forms of Sewing with needle and machine are taught, and any student may furnish material, and work for her own advantage under direction of the Superintendent. Cutting and fitting by a straight-line system are taught, and the systems are furnished at wholesale rates. Fancy needle-work and knitting may be taken at certain stages of the course.

PRINTING.—Two courses are pursued in this art. In one the student is taught the use of the implements or tools used in typography; composition and imposition; correcting proof; technical terms; presses and their workings; and the general duties of a first-class workman. The other course of lessons embraces instruction in spelling, capitalization, syllabication, punctuation, proof-reading, and such other work as will make the student accurate and expert. Wilson's Punctuation is the text-book; but much of the instruction is oral—such as grows out of the every-day experience of the office.

Admirable drill is furnished by the *Industrialist* to all, but especially to those who take the full course. The printing which the departments of the College require gives to the advanced student a fair knowledge of the principles and practice of job-work.

INSTRUMENTAL MUSIC.—Provision is made for giving instruction upon the piano, organ, orchestral and band instruments. A full course upon the organ or piano extends over four years, including harmony and composition; but the students may take lessons for a single term if they choose. The College furnishes the pianos and organs for daily practice, but the instruction is paid for at the usual rate, as given under "Expenses." Music may be the industrial for young women, unless some other is required in the course. Young men may take Music in addition to their course, if able to keep up standing in classes.

Opportunity is given for students who are sufficiently advanced to join in the weekly rehearsals of the College orchestra on Wednesday, and the cadet band on Friday.

Vocal Music.—All students are furnished instruction in Vocal Mu-

SEWING DEPARTMENT.

sic free of charge, under the direction of the Faculty. Classes meet on Mondays and Wednesdays for advanced pupils, and for beginners on Tuesdays and Thursdays, at 1:30 P.M. The advanced class shares in the music of public exercises during the Commencement week. This study is taken up at the choice of the student, but regular attendance is required as at other classes until excuse is granted.

Arrangements for special voice culture may be made with the professor in charge, on reasonable terms.

Text-books.—Scansion and Song, Brown's Prismatic Charts, Hatton, Concone, Marchesi, with selections from the opera and oratorio.

Military Training.—The course of instruction is both practical and theoretical. The practical occupies two hours each week; the theoretical an average of one.

Theoretical: A course of 32 lectures is given to the second-year class. These are designed to show how an army is organized, equipped, and supplied; to explain some of the minor operations of war; to show the organization of the militia under the militia law of this State. Instruction is afforded, to such as desire it, in other military subjects.

Practical: Drills are held twice each week. Students who wish to learn have an opportunity to do so: they are not, however, allowed to enter for a period less than one term, and, in order to attain any reasonable degree of proficiency, new recruits should attend at least a whole year.

The practical course in infantry embraces small-arm target practice, and, as far as possible, all the movements prescribed by the "Drill Regulations of the United States Army" that are applicable to a battalion. Instruction in artillery includes, as far as practicable, such portions of the United States drill regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, and firing blank cartridges.

The College battalion is divided into companies, which are officered by students appointed each term by the professor in charge, with the approval of the President.

Arms and accoutrements are furnished by the United States Government, the students being required to keep such as they use in proper condition. Uniforms for use in drill are furnished by the College.

GENERAL EQUIPMENT.

GROUNDS AND BUILDINGS.

The College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing towards the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted, according to the design of a professional landscape gardener, while well-graveled drives and good walks lead to the various buildings. All of these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and all are heated by steam or hot water. A complete system of sewerage has been provided. The buildings stand as indicated in the plat accompanying the following description:

College, 152x250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices, reception-room, cloak-rooms, studies, chapel, library, reading-room, kitchen laboratory and dairy, sewing-room, society-rooms, and 12 class-rooms.

Chemical laboratory, one story, 26x90 and 46x75 feet of floor space, in form of a cross. It contains eight rooms, occupied by the Department of Chemistry and Mineralogy.

Mechanics' Hall, 39x103 feet, two stories, and 40x80 feet, one story, occupied by wood and iron shops, printing office, music rooms, iron foundry, lumber rooms, etc., in addition.

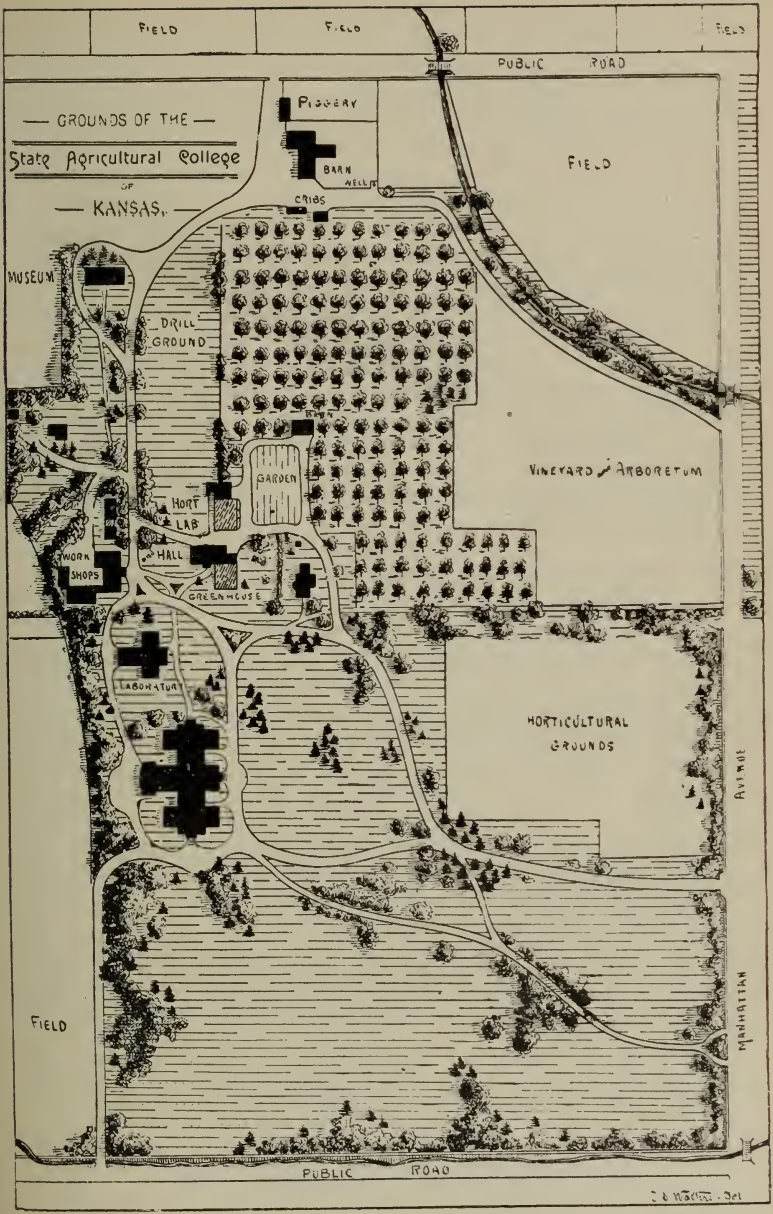
Horticultural Hall, 32x80 feet, one story and cellar, having cabinet room, class-room, and storage with greenhouse attached.

Horticultural and entomological laboratory, with propagating houses attached.

Two stone dwellings, occupied by the President and the Professor of Agriculture.

Museum Building, 46x96 feet, and two stories. This building, which has served many purposes, is now fitted for an armory, drill-room and veterinary laboratory below, and for class-room and laboratory for Department of Botany and Museum of Natural History above.

The farm barn is a double but connected stone structure, 50x75 feet and 48x96 feet, with an addition of sheds and experimental pens 40x50


— GROUNDS OF THE —
State Agricultural College
OF
— KANSAS. —
FIELD
FIELD
FIELD
PUBLIC ROAD
PIGGERY
BARN
WELL
CRIBS
FIELD
MUSEUM
DRILL GROUND
BARN
GARDEN
HORT LAB
HALL
WORK SHOPS
GREENHOUSE
VINEYARD & ARBORETUM
LABORATORY
HORTICULTURAL GROUNDS
AVENUE
MANHATTAN
FIELD
PUBLIC ROAD
J. D. Walters. Del.

feet. A basement, having stables for 75 head of cattle, silos, engine-room, and granaries, underlies the entire structure.

The horticultural barn is a stone building, containing store-room, granary, and stables for several horses.

The blacksmith shop, lumber house, implement house, piggery and various out-buildings are of wood.

LIBRARY.

The College Library consists of over 12,000 bound volumes and about 4,000 pamphlets, and is valued at $21,000. It has been selected mainly with a view to supplementing the class-room instruction in the various departments. All the books are indexed in a card catalogue, so that the resources of the Library upon any subject may be readily learned. All students have free access to the book shelves, and may draw the books for home use, under simple and most liberal regulations.

The College subscribes for the leading literary, scientific and agricultural journals; while the principal daily and weekly papers of Kansas and many from other States are received in exchange for the College publications. All these are kept on file for the use of students and Faculty.

The College has been designated as the depository of United States public documents for the Fifth Congressional District of Kansas. About 1,000 volumes have already been received on this account.

The Library is open daily except on legal holidays. During the College terms, the Library hours are from 8 A. M. to 4 P. M., and during vacation from 9 A. M. to 12 M. The Librarian or the assistant is in constant attendance, at these hours, to assist those who use the books.

An approximate estimate of the number of books, including public reports and bound periodicals, by classes, is as follows:

Classes.	*Vols.*	*Classes.*	*Vols.*
Agriculture	1,350	History	550
Horticulture	500	Biography	450
Mechanics and engineering	425	Geography and travels	300
Mathematics and astronomy	250	Dictionaries and cyclopedias	175
Physics and meteorology	325	Philology	100
Chemistry and mineralogy	300	Education	300
Geology	400	Law	80
Botany	400	Administrative reports	540
Zoölogy	300	Public documents on deposit	920
Entomology	125	Fiction, including juveniles	240
Physiology and sanitary science	250	Essays and literary criticism	300
General science, proceedings, etc.	500	Poetry	100
Military science	150	Logic and philosophy	200
Domestic science	75	Religion and morals	500
Political science	325	Fine arts	200
Bound magazines	1,250	Miscellaneous	125

MEANS OF ILLUSTRATION.

AGRICULTURE. One hundred and eighty-five acres of land used for farm purposes, with hundreds of plats under experiment in grain, grasses, and forage crops; and illustrating various methods of culture and rotation.

A barn 50x75 feet, expressly arranged for experimental uses; and connected with it a general-purpose barn, 48x96 feet, for grain, hay, horses, and cattle. Both buildings are of stone, and are provided with steam power, and equipped with improved machinery for shelling, grinding, threshing, cutting for the silo, and steaming.

Two piggeries — one of 10 pens, for experimental uses, and one of 6 pens, with separate yards, for general purposes.

An implement house, 22x50 feet, of two stories, and corn cribs.

Short-horn, Aberdeen-Angus, Hereford, Holstein-Friesian and Jersey cattle; Berkshire and Poland-China swine; and Shropshire sheep.

Farm implements of improved patterns.

Collections of grains, grasses, and forage plants.

Buildings, stock and equipments are valued at $26,000.

HORTICULTURE AND ENTOMOLOGY.—Orchards containing 100 varieties of apples, 30 of peaches, 30 of pears, 20 of plums, 30 of cherries, and 5 of apricots.

Small-fruit garden, with 200 varieties of small fruit, including blackberries, raspberries, gooseberries, currants, and strawberries; and vineyard, with 160 varieties of grapes.

Forest plantation of 12 acres, containing 20 varieties of from 1 to 20 years' growth.

Ornamental grounds, set with a variety of evergreens and deciduous trees. Sample rows, containing about 150 varieties of ornamental and useful shrubs and trees, labeled.

Vegetable garden, with hot-beds and cold-frames, and experimental beds. Practice rows for students' budding, grafting, cultivating, and pruning.

Two well-planned and furnished greenhouses of three rooms each, stocked with a collection of native and exotic plants.

Museum, containing a collection of woods from American forests, and a large series of specimens in economic and general entomology.

Value of property, exclusive of orchards and grounds, $13,000.

CHEMISTRY AND MINERALOGY.—Eight rooms, fitted with tables and apparatus for a class of 80 students in qualitative analysis, 16 in quantitative analysis, including necessary facilities for assaying, with a mineralogical collection and general illustrative apparatus. Value, exclusive of building, $8,000.

GEOLOGY, ZOÖLOGY, AND VETERINARY SCIENCE.—A general museum, well fitted with cases containing valuable collections of mounted Kansas mammals and birds, with mounted skeletons of wild and domestic animals. The largest collection of Kansas fishes and mollusks in the State. Kansas reptiles and batrachians, salt-water fishes and invertebrates, in alcohol. Collections of mound-builders' and Indian relics. Kansas fossils and rocks, typical of the geological ages found in the State.

In Veterinary Science: A laboratory fitted with apparatus and reagents, for the study of disease. A collection of charts, models, and anatomical preparations, illustrating healthy and diseased structure. Value, including general museum, $4,500.

Botany.—A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the State; also 28 compound microscopes, four dissecting microscopes, tools, reagents, etc. Valued at $3,000.

Drawing.—Models, plaster-casts, patterns, charts, easels, and implements. Valued at $1,400.

Physics.—Complete physical apparatus for general instruction in physics, and meteorological instruments, including a self-recording anemometer. Among the apparatus for special work may be mentioned, Coulomb's torsion balance, Kohlrausch differential galvanometer with reading telescope, Deprez-Carpentier ammeter, Ayrton and Perry's voltmeter, Thompson's potential and current galvanometers, Carhart-Clark standard cell, standard legal ohm, Wheatstone's meter bridge, Edelmann dynamo. The value of the whole is $4,500.

Mathematics and Surveying.—Transits, plane-table, compasses, levels, chains, models, etc. Valued at $1,250.

Mechanics and Engineering.—Carpenter shop, with separate benches and tools for 45 students in each class, besides lathes, mortising machine, circular saws, band saws, planer, friezer, boring machine, grinder, and general chest of tools for fine work. Power furnished by a 10-horse-power Atlas engine.

Shops for iron-work contain blacksmith forges to accommodate at least 16; brass foundry of 12 benches and large furnace for brass; iron foundry with two-ton cupola; machine shop equipped for 30 students, including, besides hand tools, lathes, drills, planer, etc.

Inventory of material and apparatus in both shops, $8,300.

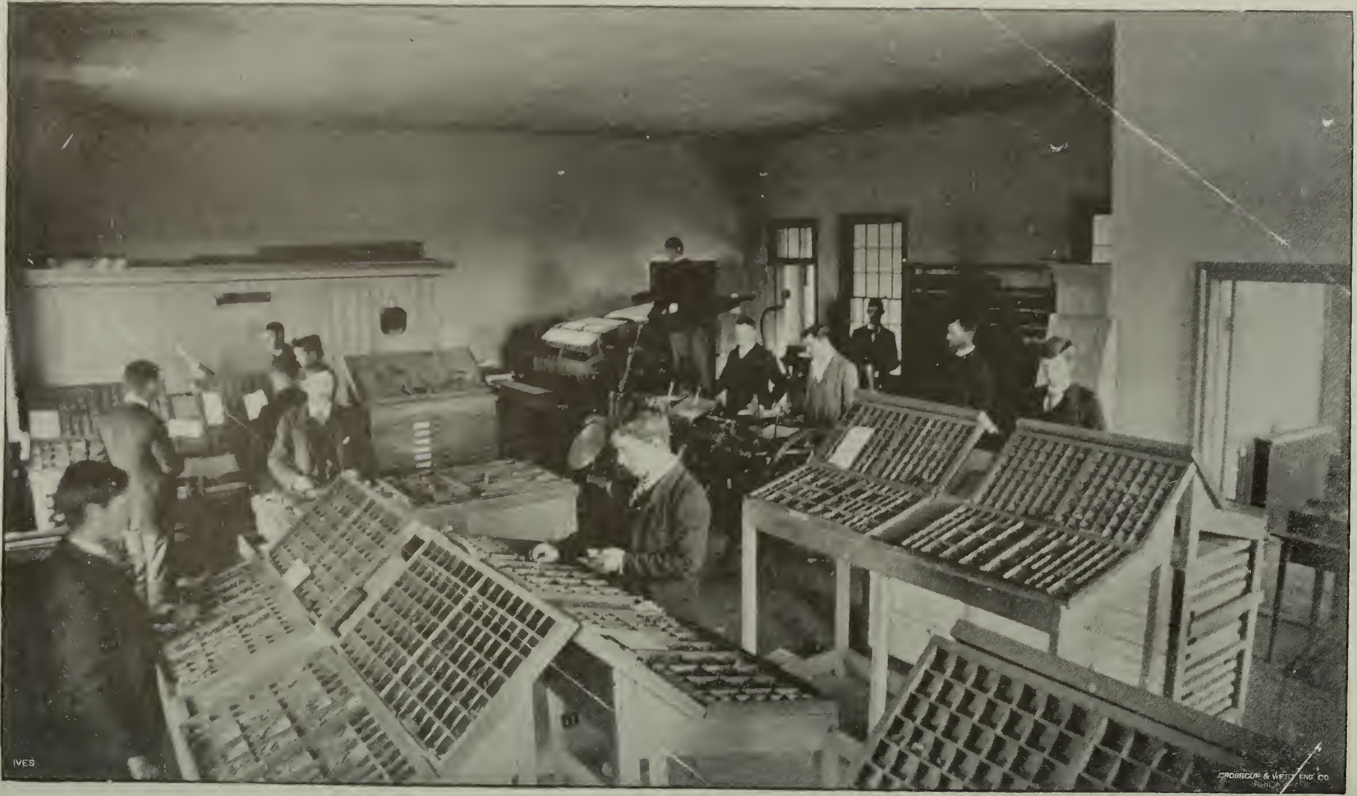
Kitchen Laboratory, with ranges, cooking utensils, dining-room furnishings, dairy furniture. Valued at $600.

Printing.—Office with 30 pairs of cases, large fonts of 6-point, 8-point, 10-point and 11-point Roman type; a good assortment of job type and brass rule; a Babcock cylinder press, with steam power, a new Liberty quarter-medium job press, a Gordon eighth-medium job press; a mitering machine, a rule-curving machine, and a paper cutter. Value of equipment, $4,300.

Sewing Rooms, with eight machines, models, patterns, and cases; worth $600.

Music Rooms, with five pianos, four organs, other instruments, and nine charts; valued at $2,000.

Armory, containing 150 stands of arms (breech-loading cadet rifles, caliber .45). with accoutrements; two three-inch rifled guns; also swords, uniforms, etc. Value, exclusive of arms, $1,000.



PRINTING DEPARTMENT.

GENERAL INFORMATION.

EXAMINATIONS.

Examinations for admission are held at the beginning of each term, as laid down in the calendar of the College year. Applicants, to enter at any time during the term, shall have special examinations. These examinations are chiefly written, and a standard of 70 per cent. is required to pass any study.

Examinations in the course are held as arranged by the Faculty. The results of these examinations are marked on a scale of 100, and combined with the average of the preceding daily exercise upon the same scale into a grade for report to the Secretary. But any student not present at three-fourths, at least, of the class exercises, receives, at such time as the teacher may name, a more extensive examination than the general one; and this examination alone decides the grade.

Averages of grades in the register are made by giving the final term grade a value of two-thirds and previous grades a value of one-third. After each term examination during the first year of attendance, a report of advancement is made to parents; and any student, upon leaving College at the close of a term, may receive a certificate of standing.

The final grade and the term average must be at least 70 for passing any study; and any student who fails to pass in two studies of the course may drop back a year or withdraw from College.

After completing the studies of the first year, students are allowed special examinations only upon recommendation of the professor in charge, and by permission of the Faculty. Permission for examination in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive.

Students deficient in entrance studies must make good such deficiencies before entering upon the work of the second year.

TERMS OF ADMISSION.

Applicants for admission at the beginning of the College year must be at least fourteen years of age, and able to pass a satisfactory examination in reading, spelling, writing, arithmetic, geography, English grammar, and United States history. Those applying later in the year must show sufficient advancement to enter the classes already in progress. Every effort should be made to begin with the first day of a term, in order to advance with the classes from the first.

The following diplomas and certificates will be received in lieu of entrance examinations:

1st. Diplomas received on the completion of a county course of study which has been approved by the Faculty, when properly signed by the county superintendent.

2d. Certificates of passing the grammar grade in any city school with a course of study approved by the Faculty, when properly signed by the city superintendent.

3d. Kansas teachers' certificates issued by the county board of examiners, showing that the above-named studies have been passed with a grade of at least 70 per cent.

The Faculty have approved the courses of study adopted by the following counties and cities; others may be submitted for approval at any time:

COUNTIES.

Allen,
Anderson,
Barber,
Brown,
Bourbon,
Butler,
Chase,
Cherokee,
Clay,
Cloud,
Cowley,
Dickinson,
Doniphan,
Douglas,
Elk,
Ellis,
Geary,
Greenwood,
Harper,
Harvey,
Jackson,
Jefferson,
Jewell,
Johnson,
Kingman,
Leavenworth,
Linn,
Marshall,
Marion,
McPherson,
Mitchell,
Montgomery,
Nemaha,
Neosho,
Osage,
Osborne,
Ottawa,
Pottawatomie,
Republic,
Reno,
Rice,
Riley,
Rooks,
Rush,
Russell,
Shawnee,
Sumner,
Wabaunsee,
Washington,
Wilson,
Woodson,
Wyandotte.

CITIES.

Abilene,
Anthony,
Arkansas City,
Atchison,
Augusta,
Beloit,
Burlington,
Caldwell,
Chanute,
Cherryvale,
Chetopa,
Clay Center,
Clifton,
Coffeyville,
Columbus,
Concordia,
El Dorado,
Emporia,
Eureka,
Fort Scott,
Gaylord,
Girard,
Great Bend,
Hiawatha,
Holton,
Horton,
Hutchinson,
Independence,
Junction City,
Kanapolis,
Kansas City,
Kingman,
Larned,
Lawrence,
Leavenworth,
Lyons,
Manhattan,
McPherson,
Minneapolis,
Newton,
Olathe,
Osage City,
Osborne,
Oswego,
Ottawa,
Paola,
Parsons,
Russell,
Salina,
Seneca,
Solomon City,
Topeka,
Washington,
Wellington,
Winfield,
Wichita.

Applicants of mature age who, for lack of advantages, are unable to pass the full examination, may be received on special conditions.

Applicants for advanced standing in the course must pass examination in all the previous studies of the class to be entered; but, if they have pursued such studies in other institutions of similar rank, they may receive credit for their standing in those institutions, upon presenting a certificate from the proper officer, showing that their course has been equivalent to that given here.

The questions here presented may serve as samples of the examinations for admission:

GRAMMAR.

1. Define grammar, analysis, parts of speech, parsing.
2. Name and define the elements of the sentence.
3. Classify sentences, and write a sentence of each class.
4. Define infinitives, participles. Give an example of each.
5. What is an adjective clause? An adverb clause? A noun clause? Show by sentences the use of each.
6. Give the subdivisions and the modifications, or properties, of the pronoun.
7. Name and illustrate the constructions in which a noun is in the nominative case. In the objective case.
8. Explain agreement of the verb, and give sentences to illustrate.
9. Analyze or diagram: "When I reflect upon the influence of a mother, of a pure, educated, Christian woman, I no longer doubt."
10. Parse italicised words:

> "*Burned Marmion's swarthy cheek* like fire,
> *And* shook *his* very *frame* for *ire*."

ARITHMETIC.

1. Find the L. C. M. and G. C. D. of 724 and 896.
2. Find the cost of 8,462 lbs. of hay, at $9.50 a ton.
3. A field containing 18 acres is 80 rods long. Find the cost of fencing it at $1.25 a rod.
4. A merchant sells a wagon for $161, and gains 15 per cent. How much did he gain?
5. If copper is mixed with 20 per cent. of its weight of nickel, what per cent. of the mixture is nickel?
6. Find the interest on $960 from March 5, 1882, to September 25, 1888, at 7 per cent.
7. Which is the better, to buy flour at $8 per barrel on 6 months' credit, or at $7.50 cash, money being worth 6 per cent.?
8. Which is the better investment, 5-per-cent. stock at 75, or 6-per-cent. stock at 80?
9. Find the cube root of .75 to three figures.
10. What will be the cost of a 90-day draft for $5,000, if exchange is ¼ per cent. discount, and money worth 6 per cent.?

GEOGRAPHY.

1. What is latitude? Longitude? A prime meridian? Explain the cause of winter and summer.
2. Name the grand divisions of the earth, and after each write the name of its principal mountain system and largest river.
3. Name and locate five lakes, five gulfs or bays, five rivers, of North America.
4. Draw a map of your native State, showing rivers, railroads, and important cities. What are its chief products?

5. Name, in their order, the States that border on the Atlantic Ocean, and give the capital of each.

6. What kind of a government has Mexico? Who are its people? What are its exports?

7. Locate the countries of South America. Give the principal exports of Argentine Republic, Brazil, and the West Indies.

8. Name eight countries of Europe, and give their capitals and forms of government. What causes the great emigration from Europe to America?

9. Bound India, the Chinese Empire, and Japan. Locate Egypt and Madagascar.

10. Trace the course of a vessel around the world, starting from New York and touching at five great ports.

UNITED STATES HISTORY.

1. Give a brief account of the first settlements in Virginia, New York, and Pennsylvania.

2. Name the wars in which colonies were engaged, and state briefly the causes and results of each.

3. (*a*) Describe three battles of the Revolutionary War. (*b*) What aid did France give to the United States during that war?

4. (*a*) Give the chief defects of the articles of confederation. (*b*) Give a history of the making of the constitution.

5. Causes of the War of 1812? Describe Perry's battle on Lake Erie, and Jackson's battle of New Orleans.

6. Causes of the Mexican War? Date and terms of treaty of peace with Mexico.

7. Chief events of Jefferson's, Monroe's and Buchanan's administrations.

8. Name, describe and give consequences of one battle in each year of the Civil War.

9. Give date of five important inventions, and state some of the effects of each.

10. Name five important events since the Civil War, and state why you consider each important.

GENERAL DUTIES AND PRIVILEGES.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character, by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week-day except Saturdays, and no student may be absent without excuse. Students enrolled in any term cannot honorably leave the College before the close of the term, unless excused beforehand by the Faculty. A full and permanent record of attendance, scholarship and deportment shows to each student his standing in the College.

Chapel exercises occupy fifteen minutes before the meeting of classes each morning, and unnecessary absence from them is noted. On Sunday no services are held in the chapel, but students are urgently advised to attend the different churches of the city.

Every Friday, at 1:30 P. M., the whole body of students gather for a lecture from some member of the Faculty, or for the rhetorical exercises of the third- and fourth-year classes. Once a week all the classes meet, in their class-rooms, for exercises in elocution and correct expression.

There are four prosperous literary societies which meet weekly, in rooms set apart for their use. The *Alpha Beta*, open to both sexes, and the *Ionian*, for ladies, meet Friday afternoon. The *Webster* and the *Hamilton* admit to membership gentlemen only, and meet on Saturday evening.

The Scientific Club, composed of members of the Faculty and students, meets in the chemical laboratory on the fourth Friday evening of each month.

Branches of the College Y. M. C. A. and Y. W. C. A. hold weekly meetings at the College, and a union meeting on the first Friday evening of each month.

Once in each term the College Hall is opened for a social gathering of Faculty and students, in which music, literary exercises, and friendly greeting find place.

Public lectures by prominent men of the State are provided from time to time, as opportunity offers. All are free.

LABOR AND EARNINGS.

Every encouragement is given to habits of daily manual labor during the College course. Only one hour of daily practice in the industrial departments is required; but students are encouraged to make use of other opportunities for adding to their ability and means.

All labor at the College is under the direction of the superintendents of the departments, and offers opportunities for increasing skill and efficiency. In regular weekly statements, the students are required to observe business forms and principles, showing from their daily account when and where the work was performed.

The shops and offices are opened afternoons and Saturdays for the accommodation of skilled students in work for their own advantage. Everywhere the student who works wins respect; and it is a matter of pride to earn one's way as far as possible.

The labor of the students in the industrial departments is principally a part of their education, and is not paid for unless the student is employed upon work for the profit of the College. Students are so employed upon the farm, in the gardens or the shops, and about the buildings. The labor is paid for at rates varying with services rendered, from 8 to 10 cents an hour. The superintendents strive to adjust their work to the necessities of students and give them the preference in all tasks suitable for their employment. So far as practicable, the work of the shops and offices is turned to account for their benefit; and the increasing extent of the grounds and sample gardens brings more of such labor. The monthly pay-roll for the past year ranges from $250 to $400.

Many students obtain work in the city or upon neighboring farms, and so pay part of their expenses. In these ways a few students are able to earn their way through College. The amount so earned will vary according to the tact and zeal of the student. The majority must expect to provide by earnings outside of term-time, or from other sources, for the larger part of their expenses. The long summer vacation of three months offers opportunity for farm or other remunerative labor; and no one need despair of gaining an education if he has the ability to use his chances well.

EXPENSES.

Tuition is free, and no general fee for incidental or contingent expenses is charged.

Lessons in instrumental music — two a week — are from $10 to $14 a term, according to its length; one a week, $6 to $8.40. In classes of two or more at a less rate. One-half is to be paid to the instructor in charge with the first lesson; the other half at the middle of the term.

The cost of text-books at the book stores is, for the first year, about $4 a term; for the second year, $2.75 a term; for the third year, $7 a term; and for the fourth year, $5.50 a term.

The expenses for apparatus and tools to each student during the course are as follows: Drawing, $3.50; microscope for botany and entomology, $1.50; case, pins, etc., for entomology, $2.25. The total expense for these articles during the four years is less than $10.

Board and washing are not furnished by the College. Board, with furnished rooms, can be procured in private families at from $2.75 to $4 per week, or table board in student clubs from $1.50 to $2.25 per week. Some students board themselves at even less cost; and rooms for the purpose can be obtained at a rent of from $1 to $3.50 a month. Washing costs from 50c. to $1 a dozen pieces.

Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 a year.

BUSINESS DIRECTIONS.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid at the office of the Treasurer, in Manhattan.

All payments of principal and interest on account of bonds or land contracts must be made to the State Treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. Geo. T. Fairchild, managing editor. Subscriptions are received by Supt. J. S. C. Thompson.

Donations for the library should be sent to the Librarian; donations for the museum to the chairman of the Committee on Museums.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

General information concerning the College and its work, studies, examinations, grades, boarding-places, etc., may be obtained at the office of the President, or by addressing the Secretary.

Applications for farmers' institutes should be addressed, as early in the season as possible, to the President.

The Experiment Station should be addressed through the Secretary of the Council.

GRADUATES.

[This list is made from the best data obtainable. A favor will be conferred by notifying the College of any errors or changes.]

1867.

Henry L. Denison, A. M., Galveston, Tex. Secretary of Gulf Improvement Company.

Belle M. Haines *Pond*, A. M., Topeka, Kas. Housewife.

Emma L. Haines *Bowen*, A. M., Manhattan, Kas. Housewife.

John J. Points, A. M., Omaha, Neb. Lawyer.

Martha A. White *Abbott*, A. M., Chicago, Ill. Housewife.

1871.

Emily M. Campbell *Robinson*, A. B. Died in 1877.

Ella F. Denison *Whedon*, A. B., Lincoln, Neb. Housewife.

Luella M. Houston, A. B., Concordia, Kas. Milliner and dressmaker.

Charles O. Whedon, B. Sc., Lincoln, Neb. Lawyer.

Kate E. White *Turley*, A. B., Chicago, Ill. Housewife.

1872.

Theophania M. Haines *Huntington*, A. B. Died in 1880.

Albert Todd, A. M., Fort Sheridan, Ill. Lieutenant First U. S. Artillery.

S. Wendell Williston, A. M., M. D., Lawrence, Kas. Professor of Paleontology and Director of the State University Geological Survey.

1873.

Eliza Z. Davis *Stringfield*, A. B., Pomona, Cal. Housewife.

Sam Kimble, A. B., Manhattan, Kas. Lawyer.

1874.

Harry A. Brous, A. M., M. D., Philadelphia, Pa. Physician.

Edgar F. Clark, A. B., Ellsworth, Kas. Lawyer.

John E. Davis, B. Sc., D. D. S., Oakland, Cal. Dentist.

William D. Gilbert, A. B., Atchison, Kas. Lawyer.

A. Judson White, A. B., Chicago, Ill. Minister.

1875.

Reuben E. Lofinck, B. Sc., Manhattan, Kas. Merchant.

Alice E. Stewart *Points*, A. M., Omaha, Neb. Housewife.

1876.

George A. Gale, A. B., Lake Worth, Fla. Fruit-grower.
Ella M. Gale *Kedzie*, A. B., Lansing, Mich. Teacher of art.
Nellie Sawyer *Kedzie*, M. Sc., Manhattan, Kas. Professor of Household Economy and Hygiene in Kansas State Agricultural College.
Carrie M. Kimball, A. B., Garden Grove, Cal. Art instructor.
Minerva E. Whitman *Heiser*, A. B., Lyndon, Kas. Housewife.

1877.

Ella S. Child, B. Sc., Manhattan, Kas. Teacher.
George H. Failyer, M. Sc., Manhattan, Kas. Professor of Chemistry in Kansas State Agricultural College.
John S. Griffing, M. Sc., Topeka, Kas. Merchant.
Walter C. Howard, B. Sc., Winnebago, Ill. Minister.
Frederick O. Hoyt, B. Sc. Died in 1884.
Louis E. Humphrey, B. Sc., Chapman, Kas. Druggist.
James F. La Tourette, B. Sc., Wagon Mound, N. M. Stock-raiser.
Marion F. Leasure, B. Sc., La Cygne, Kas. Lawyer.
William Ulrich, M. Sc., Manhattan, Kas. Contractor and builder.

1878.

Albert N. Godfrey, M. Sc., Madison, Kas. Farmer and fruit-grower.
Charles S. McConnell, B. Sc. Printer.
Geo. S. Platt, B. Sc. Died in 1878.
Amos E. Wilson, B. Sc., McPherson, Kas. National bank examiner.

1879.

Arthur T. Blain, B. Sc., Duarte, Cal. Nurseryman.
Etta Campbell *Blain*, B. Sc., Duarte, Cal. Housewife.
Wilmer K. Eckman, B. Sc., Atchison, Kas. Lumber dealer.
Corvin J. Reed, B. Sc., St. Clere, Kas. Farmer.
Harry C. Rushmore, B. Sc., Fort Payne, Ala. Hardware dealer.
Wm. H. Sikes, B. Sc., Leonardville, Kas. Merchant and grain dealer.
Lewis A. Salter, B. Sc., Argonia, Kas. Merchant.
Ella Vincent *McCormick*, B. Sc., Clay Center, Kas. Book-keeper.
Clarence E. Wood, B. Sc., A. B., Denver, Colo. Printer.

1880.

Augustine Beacham, B. Sc., Seattle, Wash. Principal of schools.
Lizzie R. Cox *Kregar*, B. Sc., Milford, Kas. Housewife.
Emma Hoyt *Turner*, B. Sc., St. Paul, Minn. Housewife.
Emma Knostman *Huse*, B. Sc., Arkansas City, Kas. Housewife.
Grace Parker *Perry*, B. Sc., Kiowa, Kas. Housewife.
Noble A. Richardson, B. Sc., San Bernardino, Cal. Superintendent of city schools.
Maria E. Sickels *Davis*, B. Sc., Chicago, Ill. Housewife.

1881.

Flora Donaldson *Reed*, B. Sc., St. Clere, Kas. Housewife.

Ulysses G. Houston, B. Sc., Concordia, Kas. Inventor.

Fletcher M. Jeffrey, B. Sc., Escondido, Cal. Lawyer.

William J. Jeffrey, B. Sc., San Diego, Cal. Agent.

Darwin S. Leach, B. Sc., Georgetown, New Mexico. Superintendent of city schools.

William J. Lightfoot, B. Sc,, Topeka, Kas. Civil engineer.

Dalinda Mason *Cotey*, B. Sc., Manhattan, Kas. Housewife.

Wirt S. Myers, B. Sc., Tampa, Florida. Furniture manufacturer.

1882.

J. Chester Allen, B. Sc. Died in 1885.

Ida Cranford *Sloan*, B. Sc., Shasta county, Cal. Housewife.

Edward V. Cripps, B. Sc., Boston, Mass. Teacher of elocution.

Warren Knaus, M. Sc., McPherson, Kas. Editor and entomologist.

Mattie E. Mails *Coons*, B. Sc., Manhattan, Kas. Housewife.

Allie S. Peckham *Cordry*, B. Sc., Belleville, Kas. Housewife.

Belle Selby *Curtiss*, B. Sc., Louisville, Ky. Housewife.

Burton L. Short, B. Sc., Kansas City, Kas. Clerk for register of deeds.

John A. Sloan, B. Sc., Shasta county, Cal. Farmer and nurseryman.

1883.

James W. Berry, B. Sc., Jewell City, Kas. Farmer, contractor, and builder.

Mary C. Bower, B. Sc., Manhattan, Kas. Clerk.

Lewis W. Call, B. Sc., LL. M., Washington, D. C. Clerk in Attorney General's office.

Emma E. Glossop, B. Sc., Manhattan, Kas. Teacher.

William J. Griffing, B. Sc., Manhattan, Kas. Farmer and fruit-grower.

Phœbe E. Haines, M. Sc., Las Cruces, N. M. Professor of Industrial Art in Agricultural College.

Hortense L. Houston, B. Sc., Concordia, Kas. Music teacher.

Jacob Lund, M. Sc. Mechanical engineer.

Katie I. Meguire *Sheldon*, B. Sc., Riverside, Cal. Housewife.

J. Dana Needham, B. Sc., Lane, Kas. Merchant.

Milan T. Ward, B. Sc., M. D., Orion, Ill. Physician.

Julius T. Willard, M. Sc., Manhattan, Kas. Assistant professor of chemistry, Kansas State Agricultural College.

1884.

Emmett S. Andress, B. Sc., Lakin, Kas. Farmer and stock-raiser.

Florence J. Brous, B. Sc., Kansas City, Kas. Teacher.

Bartholomew Buchli, M. Sc., V. S. D., Paxico, Kas. Veterinary surgeon.

John H. Calvin, B. Sc., LL. B., Topeka, Kas. Lawyer.

WM. A. COREY, B. Sc., Salt Lake City, Utah. Teacher and editor.

HENRY M. COTTRELL, M. Sc., Rhinecliff, N. Y. Superintendent of dairy farm.

CARRIE F. DONALDSON *Brown*, B. Sc., Portland, Ore. Housewife.

FLORENCE A. DONALDSON, B. Sc. Died in August, 1888.

FRANK W. DUNN, B. Sc., New Castle, Colo. Farmer and fruit-grower.

I. DAY GARDINER, B. Sc., Alma, Kas. Editor.

EDWIN H. KERN, B. Sc., Mankato, Kas. Civil engineer and farmer.

MARION M. LEWIS, B. Sc., Nebraska City, Neb. Minister.

CHARLES L. MARLATT, M. Sc., Washington, D. C. Assistant in Entomological Division, U. S. Department of Agriculture.

LINCOLN H. NEISWENDER, B. Sc., Silver Lake, Kas. Farmer.

GEO. C. PECK, B. Sc., Junction City, Kas. Printer.

HATTIE L. PECK *Berry*, B. Sc., Jewell City, Kas. Housewife.

JOHN W. SHARTEL, B. Sc., Winfield, Kas. Lawyer.

1885.

THOMAS BASSLER, B. Sc., Westgate, Kas. Teacher and nurseryman.

ALBERT DEITZ, B. Sc., Kansas City, Mo. Merchant.

GEORGE E. HOPPER, M. Sc., Manhattan, Kas. Contractor and builder.

FLORENCE F. HOUGH, B. Sc., Melrose, Iowa.

FRANK A. HUTTO, B. Sc., Stillwater, Ok. Lawyer.

ALLEN LEWIS, B. Sc., Topeka, Kas. Civil engineer.

NELLIE J. MURPHY, B. Sc., Idana, Kas. Teacher.

ARTHUR L. NOYES, B. Sc., Wabaunsee, Kas. Electrical engineer.

CLARENCE D. PRATT, B. Sc., Salt Lake City, Utah. Civil engineer.

ROLLIN R. REES, B. Sc., Minneapolis, Kas. Lawyer.

FREDERICK J. ROGERS, M. Sc., Ithaca, N. Y. Assistant in physics, Cornell University.

DOROTHY E. C. SECREST *Hungerford*, B. Sc., Elgin, Tenn. Housewife.

GRACE WONSETLER, B. Sc., Verbeck, Kas. Teacher.

EFFIE E. WOODS *Shartel*, B. Sc., Winfield, Kas. Housewife.

1886.

LILLIE B. BRIDGEMAN, B. Sc., Berkeley, Cal. Student, State University.

LOUIS P. BROUS, B. Sc., Portland, Ore. Draughtsman and topographical engineer.

PAUL H. FAIRCHILD, B. Sc., M. D., Brooklyn, N. Y. Publisher of medical journals.

ABBOTT M. GREEN, B. Sc., Santa Barbara, Cal. Civil engineer and teacher.

JAMES G. HARBORD, B. Sc., Fort Reno, Ok. Lieutenant, Sixth Infantry, U. S. army.

JOHN U. HIGINBOTHAM, B. Sc., Chicago, Ill. Cashier, wholesale house.

MARIA C. HOPPER *Getty*, B. Sc., Downs, Kas. Housewife.

E. ADA LITTLE, B. Sc., Manhattan, Kas. Assistant in sewing, and post-graduate student, State Agricultural College.

FRANK L. PARKER, B. Sc., Pueblo, Colo. Telegraph operator.

Edward H. Perry, B.Sc., Topeka, Kas. Real-estate agent.

H. Augustus Platt, B.Sc., Coronado, Kas. Farmer.

Ada H. Quinby *Perry*, B.Sc., Topeka, Kas. Housewife.

Ida H. Quinby *Gardiner*, B.Sc., Alma, Kas. Housewife.

Minnie Reed, B.Sc., Manhattan, Kas. Post-graduate student, State Agricultural College.

David G. Robertson, B.Sc., Osborne, Kas. Lawyer.

Edward O. Sisson, B.Sc., Mound City, Kas. Superintendent of schools.

John W. Van Deventer, B.Sc., Denver, Colo. Editor.

George W. Waters, B.Sc., Riley, Kas. Mail-route agent.

William E. Whaley, B.Sc., Chicago, Ill. Student of law, Northwestern University.

F. Henrietta Willard *Calvin*, B.Sc., Topeka, Kas. Housewife.

John L. Wise, B.Sc., Smithboro, Ill. Merchant.

1887.

Edgar A. Allen, B.Sc., Chicago, Ill. Teacher and law student.

Fred. H. Avery, B.Sc., Wakefield, Kas. Farmer and horse-breeder.

Claude M. Breese, M.Sc., Manhattan, Kas. Assistant in chemistry, Kansas State Agricultural College.

John B. Brown, B.Sc., Nashville, Tenn. Observer, U.S. Signal Service.

Walter J. G. Burtis, B.Sc., Fredonia, Kas. Farmer and teacher.

Mark A. Carleton, B.Sc., Manhattan. Assistant in botany, Experiment Station, Kansas State Agricultural College.

Nellie E. Cottrell *Stiles*, B.Sc., Pavilion, Kas. Housewife.

Bert R. Elliott, B.Sc., Nederland, Colo. At work on a ranch.

Frederick B. Elliott, B.Sc., Manhattan, Kas. Real-estate agent.

Clara M. Keyes, B.Sc., Banner, Cal. Teacher.

Fred. G. Kimball, B. Sc., Manhattan, Kas. Carpenter and teacher.

Frederick A. Marlatt, B.Sc., Manhattan, Kas. Assistant in entomology, Experiment Station, Kansas State Agricultural College.

William J. McLaughlin, B.Sc., Bern, Kas. Superintendent of schools.

Mary E. Moses, B.Sc., Manhattan, Kas. At home.

Charles A. Murphy, B.Sc., Argentine, Kas. Teacher.

Orlando G. Palmer, B.Sc., L.L.M., Washington, D. C. Lawyer.

Louis B. Parker, B.Sc. Died in June, 1889.

James E. Payne, B.Sc., West Point, Miss. Farmer.

Seward N. Peck, B.Sc., Topeka. Mechanic.

George N. Thompson, B.Sc., Belmond, Iowa. Carpenter.

Willis M. Wright, B.Sc., Lake Arthur, La. Farmer.

1888.

Grant Arnold, B.Sc., Toledo, Wash. Teacher.

Bertha H. Bacheller, M.Sc., Sterling, Kas. Teacher.

Clement G. Clarke, B.Sc., New Haven, Conn. Student in Yale University.

Alexander C. Cobb, B.Sc., Wagoner, Ind. Ter. Farmer and carpenter.

MATTIE COBB *Clarke*, B. Sc., New Haven, Conn. Housewife.

MINNIE H. COWELL, B. Sc., Hempstead Road, London, Eng. Hospital nurse.

LYMAN H. DIXON, B. Sc., Bent Cañon, Colo. Draughtsman.

DAVID G. FAIRCHILD, M. Sc., Washington, D. C. Assistant in Division of Vegetable Pathology, U. S. Department of Agriculture.

CARL E. FRIEND, B. Sc., Ontario, Kas. Lumber merchant.

JOHN R. HARRISON, B. Sc., Salina, Kas. Mail-route agent.

HUMPHREY W. JONES, B. Sc., Denton, Texas. Instructor in mathematics, Normal College.

NATHAN E. LEWIS, B. Sc., Hamilton, Ohio. Draughtsman.

ABBIE L. MARLATT, M. Sc., Logan, Utah. Professor of Domestic Economy, Agricultural College.

WILLIAM C. MOORE, B. Sc., Junction City, Kas. Editor.

ERNEST F. NICHOLS, B. Sc., Ithaca, N. Y. Special student in Cornell University.

HARRY E. ROBB, B. Sc., Eureka, Kas. Farmer and county surveyor.

ANNA SNYDER, B. Sc., Oskaloosa, Kas. At home.

EDWIN H. SNYDER, B. Sc., Highlands, Colo. Editor.

OLIVER L. UTTER, B. Sc., Garden City, Kas. Superintendent of schools.

AARON WALTERS, B. Sc., Golden, Colo. Student of law.

LORA L. WATERS, B. Sc., Junction City, Kas. Teacher.

DANIEL W. WORKING, jr., B. Sc., Denver, Colo. Editor of *Fancier and Farm Herald.*

1889.

EMMA A. ALLEN, B. Sc. Died in June, 1891.

JOSEPH W. BAYLES, B. Sc., Garrison, Kas. Teacher and farmer.

WALTER R. BROWNING, B. Sc., Hamlin, Kas. Civil engineer.

DAVID E. BUNDY, B. Sc., Blue Rapids, Kas. Farmer.

SAMUEL S. COBB, B. Sc., Wagoner, I. T. Druggist and postmaster.

JUDSON H. CRISWELL, B. Sc., Manhattan, Kas. Farmer.

MATTIE I. FARLEY *Carr*, B. Sc., Ruby, Wash. Housewife.

CLARENCE E. FREEMAN, B. Sc., North Topeka, Kas. Principal of Shorey school.

HATTIE L. GALE *Sanders*, B. Sc., Lake Worth, Fla. Housewife.

JOHN S. HAZEN, B. Sc., Des Moines, Iowa. U. S. Signal Service observer.

ALBERT B. KIMBALL, B. Sc., Manhattan, Kas. Teacher and farmer.

WILLIAM KNABB, B. Sc., Hiawatha, Kas. Bank clerk.

MARY C. LEE, B. Sc., Manhattan, Kas. Teacher.

ALONZO A. MILLS, B. Sc., Logan, Utah. Assistant in agriculture, Agricultural Experiment Station, Utah.

SUSAN W. NICHOLS, B. Sc., St. Joseph, Mo. Music teacher.

WALTER H. OLIN, B. Sc., Osborne, Kas. Superintendent of schools.

ELI M. PADDLEFORD, B. Sc., Riley, Kas. Principal of school.

MAUDE F. SAYRES, B. Sc., Ottawa, Kas. At home.

FLORINE SECREST, B. Sc., San José, Cal. Teacher.

STANLEY SNYDER, B. Sc., Oskaloosa, Kas. Farmer.

Charles W. Thompson, B. Sc., Holton, Kas. Dentist.

Jane C. Tunnell, B. Sc., Manhattan, Kas. Assistant Librarian, Kansas State Agricultural College.

Ina M. Turner, B. Sc., Topeka, Kas. Printer.

Robert U. Waldraven, B. Sc., Parallel, Kas. Teacher and farmer.

Henry S. Willard, B. Sc., M. D., Manhattan, Kas. Physician.

1890.

Samuel I. Borton, B. Sc., Hilltop, Kas. Farmer.

Frank A. Campbell, B. Sc., Highlands, Colo. Reporter.

Arthur F. Cranston, B. Sc., Lawrence, Kas. Assistant in Law Department, State University.

John Davis, B. Sc., Emporia, Kas. Student at State Normal.

Grant W. Dewey, B. Sc., Manhattan, Kas. Photograher.

Charles J. Dobbs, B. Sc., Topeka, Kas. Student of law and teacher.

Charles W. Earle, B. Sc., Denver, Colo. Advertising agent.

Schuyler C. Harner, B. Sc., Leonardville, Kas. Teacher and farmer.

John W. Ijams, B. Sc., Osawkie, Kas. Farmer.

Bertha S. Kimball, B. Sc., Manhattan, Kas. Teacher.

Harriet E. Knipe, B. Sc., Manhattan, Kas. At home.

Nellie P. Little, B. Sc., Manhattan, Kas. Teacher.

Ellsworth Thomas Martin, B. Sc., Georgetown, Colo. Miner and solicitor.

Silas C. Mason, B. Sc., Manhattan, Kas. Assistant Professor of Horticulture, Kansas State Agricultural College.

Wilton L. Morse, B. Sc., Mancos, Colo. Teacher.

Albert E. Newman, B. Sc., Rago, Kas. Farmer and teacher.

Julia R. Pearce, B. Sc., Manhattan, Kas. Clerk in executive offices of State Agricultural College.

Emil C. Pfeutze, B. Sc., Manhattan, Kas. Superintendent of Manhattan water-works.

William H. Sanders, B. Sc., Lake Worth, Fla. Teacher.

Emma Secrest, B. Sc., Randolph, Kas. Teacher.

Mary B. Senn, B. Sc., Enterprise, Kas. Teacher, and post graduate student, Kansas State Agricultural College.

Ralph Snyder, B. Sc., Oskaloosa, Kas. Farmer and teacher.

George E. Stoker, B. Sc., Cambridge, Mass. Law student at Harvard University.

Walter T. Swingle, B. Sc., Washington, D. C. Assistant in Division of Vegetable Pathology, Department of Agriculture.

Gilbert J. Van Zile, B. Sc., Georgetown, Colo. Miner and solicitor.

Harry N. Whitford, B. Sc., Manhattan, Kas. Teacher.

Thomas E. Wimer, B. Sc.. Died in June, 1890.

1891.

William Aaron Anderson, B. Sc., Topeka, Kas. Stenographer.

William Sherman Arbuthnot, B. Sc., D. V. S., Cuba, Kas. Veterinarian.

Herman William Avery, B. Sc., Wakefield, Kas. Farmer and law student.

Judd Noble Bridgman, B. Sc., Manhattan, Kas. Post-graduate student and instructor, State Agricultural College.

Robert James Brock, B. Sc., Manhattan, Kas. Law student.

Francis Charles Burtis, B. Sc., Manhattan, Kas. Assistant in agriculture, Experiment Station, State Agricultural College.

Charles Albert Campbell, B. Sc., Manhattan, Kas. Student of theology.

Spencer Norman Chaffee, B. Sc., Green, Kas. Teacher and farmer.

Ephraim Clay Coburn, B. Sc., Kansas City, Kas. Clerk in packing house.

Gertrude Coburn, B. Sc., Menomonie, Wis. Instructor in household economy.

Tina Louise Coburn, B. Sc., Kansas City, Kas. Teacher.

Rachel Callie Conwell, B. Sc., Manhattan, Kas. Teacher.

Christine Mossman Corlett, B. Sc., Manhattan, Kas. Teacher.

Mary Emmeline Cottrell, B. Sc., Wabaunsee, Kas. Teacher.

Phil. Sheridan Creager, B. Sc., Jamestown, Kas. Farmer and teacher.

Kary Cadmus Davis, B. Sc., Emporia, Kas. Student, State Normal.

Thomas Clarke Davis, B. Sc., Benedict, Kas. Farmer.

Helen Pearl Dow, B. Sc., Manhattan, Kas. Clerk in post office.

Anna Fairchild *White*, B. Sc., Manhattan, Kas. Housewife.

Harry Benson Gilstrap, B. Sc., Chandler, Ok. Printer and editor.

Almon Arthur Gist, B. Sc., Belleville, Kas. Telegraph operator.

Amy Myrtle Harrington, B. Sc., Emporia, Kas. Student, State Normal.

Delpha May Hoop, B. Sc., Manhattan, Kas. Teacher.

Mayme Amelia Houghton, B. Sc., Manhattan, Kas. Teacher.

Willis Wesley Hutto, B. Sc., St. George, Kas. Teacher.

George Victor Johnson, B. Sc., Chandler, Ok. Printer and editor.

Frank Mullett Linscott, B. Sc., D.V.S., St. Joseph, Kas. Veterinarian.

Bessie Belle Little, B. Sc., Manhattan, Kas. Post-graduate student, State Agricultural College.

Albert Edwin Martin, B. Sc., Denver, Colo. Telegraph operator.

Nellie Evangeline McDonald, B. Sc., Manhattan, Kas. Teacher.

David Collins McDowell, B. Sc., Manhattan, Kas. Student of theology.

Alfred Midgley, B. Sc., Minneapolis, Kas. Farmer.

Madeleine Wade Milner, B. Sc., Manhattan, Kas. At home.

Paul Chambers Milner, B. Sc., Topeka, Kas. Clerk in Santa Fé R. R. office.

Harry Elbridge Moore, B. Sc., Portland, Ore. Book-keeper.

John Otis Morse, B. Sc., Mound City, Kas. Teacher.

Hattie May Noyes, B. Sc., Wabaunsee, Kas. Teacher.

Louise Reed, B. Sc., Topeka, Kas. Teacher.

Artemus Jackson Rudy, B. Sc., Fresno, Cal. Fruit-raiser.

Henry Vernon Rudy, B. Sc., Fresno, Cal. Fruit-raiser.

Lottie Jane Short, B. Sc., Manhattan, Kas. Post-graduate student, State Agricultural College.

Ben Skinner, B. Sc., Fairview, Kas. Teacher.

Caroline Scott Stingley, B. Sc., Manhattan, Kas. Teacher.

Lillian Alice St. John, B. Sc., Manhattan, Kas. Teacher.

Ellis Cheney Thayer, B. Sc., Roxbury, Mass. Student, School of Technology.

Sam L. Van Blarcom, B. Sc., Kansas City, Kas. Railroad mail-agent.

Frank Albert Waugh, B. Sc., Helena, Mont. Editor, *Agricultural Journal.*

Fannie Elizabeth Waugh, B. Sc., McPherson, Kas. At home.

Flora Emilie Wiest, B. Sc., Manhattan, Kas. Teacher.

Bertha Winchip, B. Sc., Manhattan, Kas. At home.

Alfred Orin Wright, B. Sc., Burr Oak, Kas. Teacher.

Effie Jeannetta Zimmerman, B. Sc., Troy, Kas. At home.

SUMMARY.

During the 29 years of its existence, the College has received over 3,000 students, about a third of whom were young women. Most of them have come from farmers' homes, and, after from three months to three years of study, have gone back to such homes without graduation.

The number of graduates up to 1891 is 284, of whom 95 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of Bachelor of Arts. Since 1877, all have received the degree of Bachelor of Science, after a four-years course in the sciences, with good English training.

Of the 189 men, 5 are deceased, and the remainder are reported in the following occupations:

Farmers	34
Fruit-growers and nurserymen	5
Stock-raisers	2
Assistants in Agricultural Experiment Stations	4
Assistants in U. S. Department of Agriculture	3
Editor of agricultural paper	2
Teachers and students of special sciences	10
Veterinary surgeons	3
Mechanics	4
Civil, electrical and mechanical engineers	9
Contractors and builders	3
Architects and draughtsmen	3
General business men	8
Merchants	9
Printers	4
Photographer	1
Superintendents of public schools	11
Teachers of public schools	24

Students in other institutions	5
Officers in army	2
Observers in Weather Service	2
Physicians and students of medicine	3
Druggists	1
Dentists	3
Editors	9
Ministers	5
Lawyers and students of law	20
Officials and official clerks	17
Total	206
In two occupations	22
	184

Of the 95 women, 4 are deceased, and the remainder are occupied as follows:

Housewives	34
At home	8
Assistant in sewing department	1
Teachers of household economy	3
Teachers in public schools	26
Teachers and students of special sciences	5
Teachers of music	2
Teachers of art	2
Clerks or stenographers	4
Printer	1
Milliner and dressmaker	1
Assistant librarian	1
Hospital nurse	1
Students in other institutions	2
Total	91

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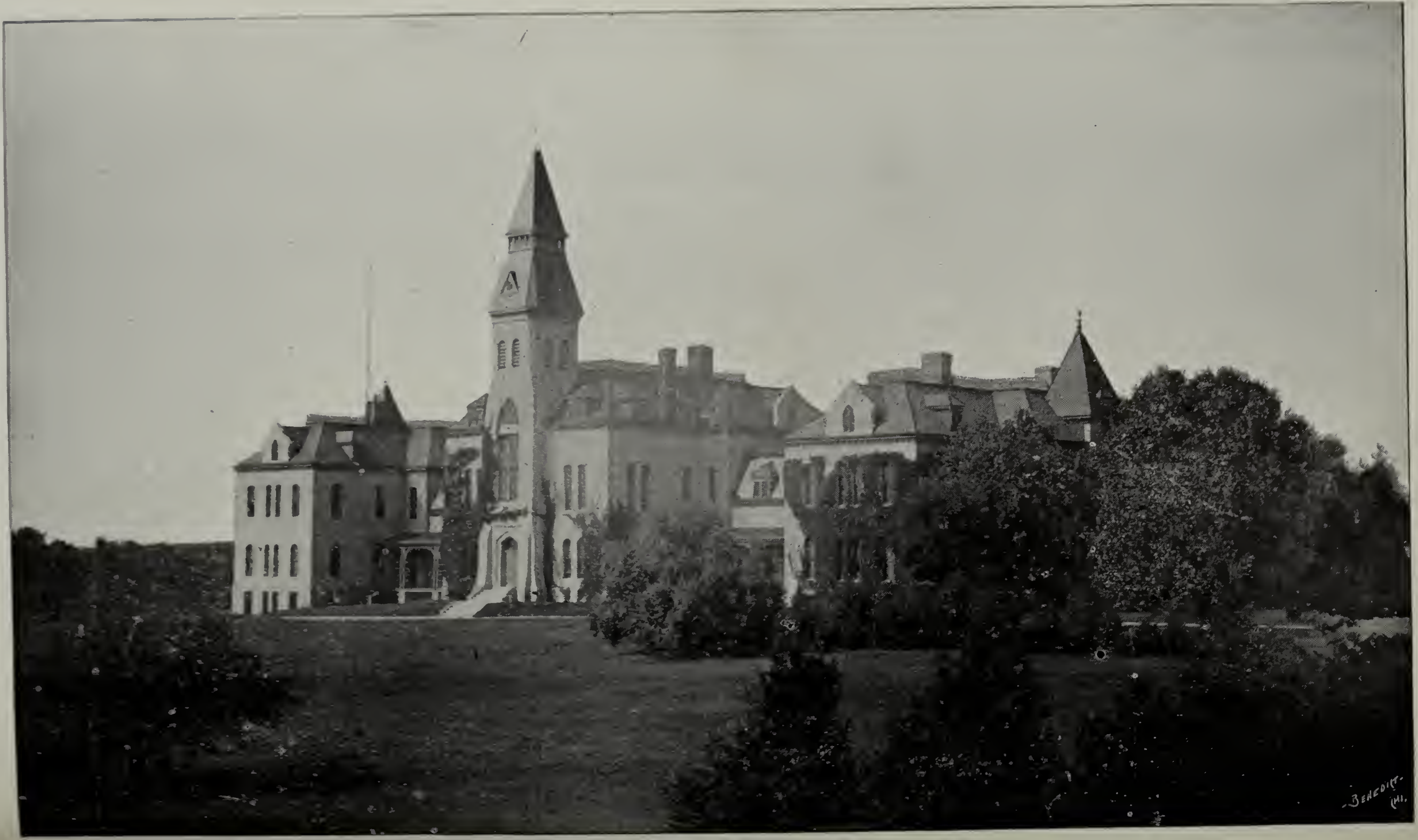

MAIN COLLEGE HALL.

THIRTIETH ANNUAL CATALOGUE

OF THE

Officers, Students, and Graduates

OF THE

...STATE...

Agricultural College

OF KANSAS.

1892-'93.

MANHATTAN, KANSAS,
1893.

Terms and Vacations.

Fall Term, 1893.

WEDNESDAY, SEPT. 13.—Examination for admission, at 9 A. M.
THURSDAY, SEPT. 14.—College year begins.
FRIDAY, OCT. 27.—Examination.
FRIDAY, DEC. 8.—Annual exhibition of the Alpha Beta Society.
THURSDAY AND FRIDAY, DEC. 21, 22.—Examination at close of fall term.
DECEMBER 23 TO JANUARY 8.—Winter vacation.

Winter Term, 1894.

MONDAY, JAN. 8.—Examination for admission, at 9 A. M.
TUESDAY, JAN. 9.—Winter term begins.
SATURDAY, FEB. 3.—Annual exhibition of the Hamilton Society.
FEBRUARY 6 TO 17.—Short lecture course for farmers.
FRIDAY, FEB. 16.—Examination.
SATURDAY, MAR. 17.—Annual exhibition of the Webster Society.
THURSDAY AND FRIDAY, MAR. 29, 30.—Examination, close of winter term.

Spring Term, 1894.

MONDAY, APRIL 2.—Spring term begins.
FRIDAY, APRIL 27.—Annual exhibition of the Ionian Society.
FRIDAY, MAY 4.—Examination.
MONDAY AND TUESDAY, JUNE 11, 12.—Examination at close of year.
JUNE 10 TO 13.—Exercises of Commencement week.
WEDNESDAY, JUNE 13, AT 10 A. M.—Commencement.
JUNE 14 TO SEPTEMBER 12.—Summer vacation.

Fall Term, 1894.

WEDNESDAY, SEPT. 12—Examination for admission, at 9 A. M.
THURSDAY, SEPT. 13.—College year begins.

Board of Regents.

HON. A. P. FORSYTH (1894),* *President*,
Liberty, Montgomery county.

HON. W. D. STREET (1896), *Vice President*,
Oberlin, Decatur county.

HON. JOSHUA WHEELER (1894), *Treasurer*,
Nortonville, Jefferson county.

HON. E. D. STRATFORD (1895), *Loan Commissioner*,
El Dorado, Butler county.

HON. ED. SECREST (1895),
Randolph, Riley county.

HON. HARRISON KELLEY (1896),
Burlington, Coffey county.

PRES. GEO. T. FAIRCHILD (*ex officio*), *Secretary*.

I. D. GRAHAM, *Assistant Secretary*,
Manhattan.

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*Term expires.

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Board of Instruction.

FACULTY.

GEORGE T. FAIRCHILD, A. M. (*Oberlin*), President,
Professor of Logic and Philosophy.

GEORGE H. FAILYER, M. Sc. (*Kansas Agricultural College*),
Professor of Chemistry and Mineralogy.

EDWIN A. POPENOE, A. M. (*Washburn*),
Professor of Horticulture and Entomology, Superintendent of Orchards and Gardens.

DAVID ERNEST LANTZ, M. Sc. (*Pennsylvania State Normal*),
Professor of Mathematics, Librarian.

JOHN D. WALTERS, M. Sc. (*Kansas Agricultural College*),
Professor of Industrial Art and Designing.

IRA D. GRAHAM, A. M. (*Eureka*),
Secretary, Instructor in Bookkeeping.

OSCAR EUGENE OLIN,
Professor of English Language and Literature.

Mrs. NELLIE SAWYER KEDZIE, M. Sc. (*Kansas Agricultural College*),
Professor of Household Economy and Hygiene.

Mrs. ELIDA E. WINCHIP,
Superintendent of Sewing.

OZNI P. HOOD, B. Sc. (*Rose Polytechnic*),
Professor of Mechanics and Engineering, Superintendent of Workshops.

ALEXANDER B. BROWN, (*Graduate of Boston Music School,*) A. M. (*Olivet*),
Professor of Music.

JOHN S. C. THOMPSON,
Superintendent of Printing.

FRANCIS H. WHITE, A. M. (*Princeton*),
Professor of History and Political Science.

CHARLES C. GEORGESON, M. Sc. (*Michigan Agricultural College*),
Professor of Agriculture, Superintendent of Farm.

EDWIN B. BOLTON, Captain 23d U. S. Infantry (*United States Military Academy*),
Professor of Military Science and Tactics.

ERNEST R. NICHOLS, B. D. (*Iowa State Normal*), B. S., A. M. (*State University of Iowa*),
Professor of Physics.

NELSON S. MAYO, D. V. S. (*Chicago Veterinary College*), M. S. (*Michigan Agricultural College*),
Professor of Physiology and Veterinary Science.

JULIUS T. WILLARD, M. Sc. (*Kansas Agricultural College*),
Assistant Professor of Chemistry.

ALBERT S. HITCHCOCK, M. Sc. (*Iowa Agricultural College*),
Professor of Botany.

SILAS C. MASON, B. Sc. (*Kansas Agricultural College*),
Assistant Professor of Horticulture.

Miss JOSEPHINE C. HARPER,
Instructor in Mathematics.

Miss ALICE RUPP,
Instructor in English.

Other Officers.

C. M. BREESE, M. Sc., Assistant in Chemistry.
JULIA R. PEARCE, B. Sc., Assistant Librarian.
BESSIE B. LITTLE, B. Sc., Assistant in Sewing.
GRACE M. CLARK, B. Sc., Stenographer in Executive Offices.
F. C. SEARS, B. Sc., Foreman of Orchards and Gardens.
WM. BAXTER, Foreman of Greenhouse.
W. L. HOUSE, Foreman of Carpenter Shop.
E. HARROLD, Foreman of Iron Shop.
L. A. McKEEN, Foreman of Farm.
C. A. GUNDAKER, Engineer.
A. C. McCREARY, Janitor.*
F. F. DAVIS, Janitor.†

Student Assistants.

PHŒBE E. HAINES, M. Sc., Industrial Art.
MINNIE REED, B. Sc., Geography, Calisthenics.
LORA L. WATERS, B. Sc., Arithmetic, English.
CLARENCE E. FREEMAN, B. Sc., Athletics.
MARIE B. SENN, B. Sc., English.
LOTTIE J. SHORT, B. Sc., Household Economy.
RUTH T. STOKES, B. Sc., English.
EDMUND C. ABBOTT, Agriculture.
ALBERT DICKENS, Horticulture.
MAC F. HULETT, Printing.
FRED HULSE, Surveying.
CHARLES R. HUTCHINGS, Woodwork.
THOMAS E. LYON, Agriculture.
THEO. W. MORSE, Horticulture.
CH. W. PAPE, Mineralogy.
MAUDE H. PARKER, Music.
VICTOR I. SANDT, Chemistry and Mineralogy.
J. A. SCHEEL, Mineralogy.
FRED R. SMITH, Surveying.
WILLIAM E. SMITH, Horticulture.
WILLIAM H. STEUART, Surveying.
JOHN STINGLEY, Horticulture.

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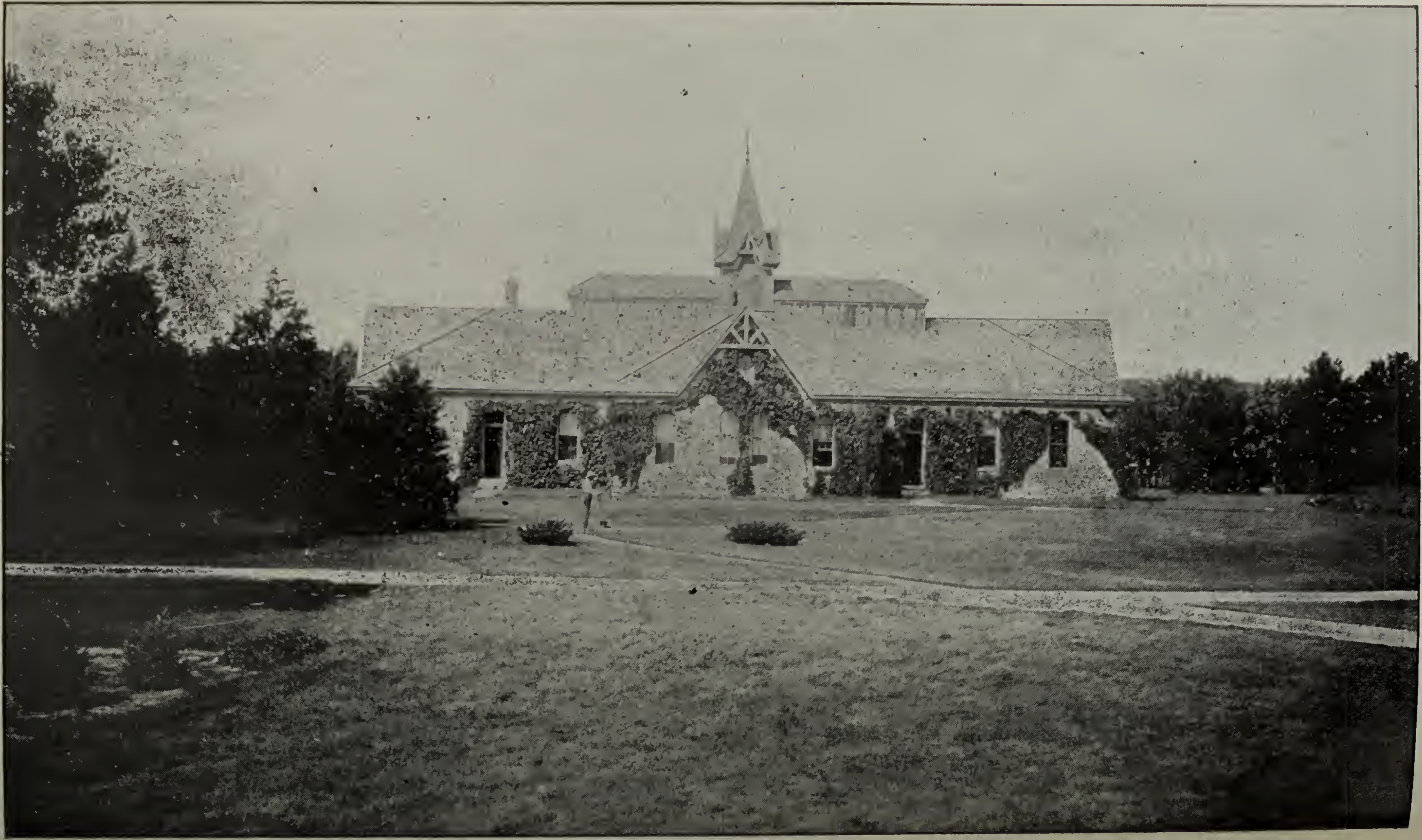
* Resigned, December 31, 1892.
† Appointed, January 1, 1893.



CHEMICAL LABORATORY.

Experiment Station.

Council.

PRESIDENT FAIRCHILD, Chairman, *ex officio*.
PROFESSOR FAILYER, Chemistry.
PROFESSOR POPENOE, Horticulture and Entomology.
PROFESSOR GEORGESON, Agriculture.
PROFESSOR MAYO, Veterinary Science.
PROFESSOR HITCHCOCK, Botany.

I. D. GRAHAM, Secretary.

Assistants and Foremen.

J. T. WILLARD, M. Sc., Chemistry.
S. C. MASON, B. Sc., Horticulture.
F. A. MARLATT, B. Sc., Entomology.
WM. SHELTON, Foreman of Farm.*
F. C. BURTIS, B. Sc., Agriculture.
D. H. OTIS, B. Sc., Agriculture.
M. A. CARLETON, B. Sc., Botany.

---

* Resigned, February 28, 1893.

Students.

POST GRADUATES.

CANDIDATES FOR ADVANCED DEGREE, 1893.

RESIDENT.

Mark A. Carleton, '87..................*Botany, Horticulture.*
Manhattan, Riley county.

Clarence E. Freeman, '89..............*Physics, Engineering.*
North Topeka, Shawnee county.

Silas C. Mason, '90.....................*Horticulture, Botany.*
Manhattan, Riley county.

Minnie Reed, '86......................*Botany, Domestic Economy, Horticulture.*
St. Clere, Pottawatomie county.

Marie Barbara Senn, '90.................*Chemistry, Domestic Economy.*
Enterprise, Dickinson county.

Lottie Jane Short, '91.............. ...*Chemistry, Domestic Economy.*
Blue Rapids, Marshall county.

Lora Luvernia Waters, '88..............*Botany, Domestic Economy.*
Junction City, Geary county.

NONRESIDENT.

John Brookins Brown, '87..............*Agriculture, Physics.*
Nashville, Tennessee.

Walter Herbert Olin, '89.................*Agriculture, Botany.*
Osborne, Osborne county.

IN COURSE.

RESIDENT.

Frank Charles Burtis, '91...............*Agriculture, Botany.*
Manhattan, Riley county.

Grace Maria Clark, '92..................*Botany, Literature.*
Manhattan, Riley county.

Mary Emmeline Cottrell, '91............*Horticulture, Chemistry, Domestic Economy.*
Wabaunsee, Wabaunsee county.

Malvina G. Grant, K. S. N. S.............*Domestic Economy.*
Beloit, Mitchell county.

Phœbe Ellen Haines, '83................*Industrial Art, Domestic Economy.*
Manhattan, Riley county.

Lilla A. Harkins, S. D. A. C. ....*Chemistry, Domestic Economy.*
Brookings, South Dakota.

Bertha Sarah Kimball, '90..............*Entomology, Horticulture.*
Manhattan, Riley county.

Bessie Belle Little, '91 .... *Music, Domestic Economy.*
Manhattan, Riley County.

James Laird McDowell, '92 .... *Iron Work.*
Manhattan, Riley county.

Frederick Albert Marlatt, '87 .... *Entomology, Horticulture.*
Manhattan, Riley county.

Fred. C. Sears, '92 .... *Horticulture, Botany.*
Manhattan, Riley county.

Ruth Tipton Stokes, '92 .... *Botany, Domestic Economy.*
Garnett, Anderson county.

Mary Alice Vail, '92 .... *Domestic Economy, Botany, Literature.*
Manhattan, Riley county.

NONRESIDENT.

Rachel Callie Conwell, '91 .... *Domestic Economy.*
Nelson, Indian Territory.

Phil Sheridan Creager, '91 .... *Botany.*
Denver, Colorado.

Lyman Hempstead Dixon, '88 .... *Physics, Engineering.*
Boise City, Idaho.

William J. Lightfoot, '81 .... *Physics, Engineering.*
Cripple Creek, Colorado.

Ava Hamil-Tillotson, '92 .... *Zoölogy, Domestic Economy.*
Salina, Saline county.

Frank Albert Waugh, '91 .... *Horticulture, Botany.*
Stillwater, Oklahoma.

George Washington Wildin, '92 .... *Mathematics, Physics, Engineering.*
Topeka, Shawnee county.

FOURTH YEAR.

Name.	*Post Office and County.*
Edmund Clarence Abbott,	Garden City, Finney.
Edward Jones Abell,	Leonardville, Riley.
Edwin McMaster Stanton Curtis,	Council Grove, Morris.
Corinne Louise Daly,	Nashville, *Michigan.*
Laura Greeley Day,	Manhattan, Riley.
Ione Dewey,	Manhattan, Riley.
Albert Dickens,	Alden, Rice.
Mary Maud Gardiner,	Bradford, Wabaunsee.
Susie Hall,	Farmington, Atchison.
Mary Frances Burgoyne Harman,	Valley Falls, Jefferson.
Ivy Frances Harner,	Lasita, Riley.
Margaretha Elise Horn,	Westerbergen, *Germany.*
Marcia Ione Hulett,	Edgerton, Johnson.
Onie Hulett,	Edgerton, Johnson.
Fred Hulse,	Keats, Riley.
Charles R. Hutchings,	Pomona, Franklin.
Charles Augustus Kimball,	Manhattan, Riley.
Maude Ethel Knickerbocker,	Long Pine, *Nebraska.*
Thomas Eddy Lyon,	Riley, Riley.

Name.	*Post Office and County.*
William Otis Lyon,	Clay Centre, Clay.
McLeod Wilson McCrea,	Dunavant, Jefferson.
Rose Edith McDowell,	Manhattan, Riley.
George Lane Melton,	Silverdale, Cowley.
William Douglas Morrison,	Arispie, Pottawatomie.
Eusebia DeLong Mudge,	Eskridge, Wabaunsee.
Nora Newell,	Manhattan, Riley.
August Fred Niemoller,	Stitt, Dickinson.
Susie Amanda Noyes,	Wabaunsee, Wabaunsee.
Henry Leamer Pellett,	Prairie Centre, Johnson.
Charles John Peterson,	Randolph, Riley.
Carl Frederic Pfuetze,	Manhattan, Riley.
John Dewitt Riddell,	Conway, McPherson.
John Albert Rokes,	Onaga, Pottawatomie.
Agnes Romick,	Manhattan, Riley.
Fred Raymond Smith,	Manhattan, Riley.
George Wildman Smith,	Manhattan, Riley.
William Elmer Smith,	Manhattan, Riley.
John Edwin Taylor,	Berryton, Shawnee.
John Eugene Thackrey,	Manhattan, Riley.
Joseph B. Thoburn,	Peabody, Marion.
Charles Henry Thompson,	Bakersfield, *California.*
George K. Thompson,	Irving, Marshall.
William James Yeoman,	La Crosse, Rush.

THIRD YEAR.

William Trueman Allen,	Manhattan, Riley.
Frank Weber Ames,	Riley, Riley.
George Gordon Boardman,	Centralia, Nemaha.
Joe William Brooks,	Manhattan, Riley.
Clara Francelia Castle,	Manhattan, Riley.
George Luther Christensen,	Mariadahl, Riley.
John Cornelius Christensen,	Mariadahl, Riley.
Lorena Estella Clemons,	Alida, Geary.
Martha Cottrell,	Wabaunsee, Wabaunsee.
Sarah Esther Cottrell,	Wabaunsee, Wabaunsee.
Ernest Brown Coulson,	Anthony, Harper.
Alverta May Cress,	Manhattan, Riley.
Fannie Jane Cress,	Steubenville, *Ohio.*
Cyrus S. Criswell,	Manhattan, Riley.
Elsie Emmeline Crump,	Manhattan, Riley.
David Thomas Davies,	Manhattan, Riley.
Daisy Day,	Manhattan, Riley.
Lillie C. Dial,	Cleburne, Riley.
Ernest A. Donaven,	Agra, Phillips.
Jephthah W. Evans,	Manhattan, Riley.
George Forsyth,	Howard, Elk.
Isabella Russell Frisbie,	Manhattan, Riley.
Eugene Leonard Frowe,	Louisville, Pottawatomie.

Name.	*Post Office and County.*
Walter Harling,	Manhattan, Riley.
Mary Eliza Haulenbeck,	Manhattan, Riley.
Blanche Etta Hayes,	Manhattan, Riley.
Lorena Marguerite Helder,	Manhattan, Riley.
Mark V. Hester,	Haviland, Kiowa.
Abram Johnson,	Melvern, Osage.
John James Johnson, jr.,	Success, Russell.
Samuel B. Johnson,	Melvern, Osage.
Fred Ralph Jolly,	Manhattan, Riley.
Isaac Jones, jr.,	Ada, Lincoln.
William Irvin Joss,	Fairview, Brown.
Stella Victoria Kimball,	Manhattan, Riley.
Robert McIntosh Laundy,	Wreford, Geary.
Mary Eliza Lyman,	Manhattan, Riley.
William Henry Moore,	Manhattan, Riley.
Sarah Moore,	Gardner, Johnson.
Elizabeth Morrison,	Arispie, Pottawatomie.
Theo. Wattles Morse,	Mound City, Linn.
James Francis Odle,	Rossville, Shawnee.
Oscar Albert Otten,	Brenner, Doniphan.
Ida Rebecca Pape,	Topeka, Shawnee.
Maude Helen Parker,	Manhattan, Riley.
Charles Randolph Pearson,	Collyer, Trego.
Katharine Hall Pierce,	Winfield, *Iowa.*
Horace Greeley Pope,	Manhattan, Riley.
Ada Rice,	Manhattan, Riley.
Minnie Louisa Romick,	Manhattan, Riley.
Winnie Luella Romick,	Manhattan, Riley.
Victor Irvin Sandt,	Alden, Rice.
John Alfred Scheel,	Emporia, Lyon.
Jacob Ulrich Secrest,	Randolph, Riley.
Charles Baxter Selby,	Manhattan, Riley.
Charles Chrisfield Smith,	Manhattan, Riley.
Jennie Ruth Smith,	Manhattan, Riley.
Thomas H. Smyth,	Beloit, Mitchell.
Wesley O. Staver,	Dallas, *Missouri.*
William Henry Steuart,	Winchester, Jefferson.
John Stingley,	Manhattan, Riley.
Dora Thompson,	Irving, Marshall.
Delbert Timbers,	Beloit, Mitchell.
Samuel R. Vincent,	Argonia, Sumner.
Lawrence A. Waters,	Junction City, Geary.
John Melancthon Williams,	Edgerton, Johnson.

SECOND YEAR.

Carl D. Adams,	Osawkie, Jefferson.
Deane Collier Arnold,	Louisville, Pottawatomie.
Asa William Barnard,	Manhattan, Riley.
Robert John Barnett,	Denison, Jackson.

Name.	*Post Office and County.*
Franklin Fairbanks Baxter,	Manhattan, Riley.
Arthur Denman Benson,	Colfax, *Illinois.*
Arthur Wiltshire Brewer,	Manhattan, Riley.
Fred. Broadbent,	Erie, Neosho.
Bert Mills Brown,	Fall River, Greenwood.
William Edward Bryan,	Centralia, Nemaha.
Con Morrison Buck,	Oskaloosa, Jefferson.
Walter Emmet Butler,	Albuquerque, *New Mexico.*
James Marion Calhoun,	New Murdock, Kingman.
Plummer Carnahan,	Centralia, Nemaha.
Frank E. Cheadle,	Enon, Barber.
Marshall Chandler,	Argentine, Wyandotte.
William Arthur Coe,	Coloma, Woodson.
Burton Wesley Conrad,	Capioma, Nemaha.
Florence Ruth Corbett,	Manhattan, Riley.
Sid H. Creager,	Jamestown, Republic.
Alexis Craine Cutler,	Wabaunsee, Wabaunsee.
Frank Andrew Dawley,	Vincent, Osborne.
Flora Day,	Manhattan, Riley.
George Adam Dean,	Topeka, Shawnee.
Charles Sumner Dearborn,	Silver Lake, Shawnee.
George Henry Dial,	Cleburne, Riley.
John Dougherty,	Manhattan, Riley.
Victor Emrick,	Lone Tree, *Missouri.*
Robert Kilby Farrar,	Axtell, Marshall.
Edwin Roy Farwell,	Osborne, Osborne.
Josephine Finley,	Manhattan, Riley.
Mary Finley,	Manhattan, Riley.
Ernest Harrison Freeman,	North Topeka, Shawnee.
Joanna Freeman,	Manhattan, Riley.
Arthur Lorenzo Frowe,	Louisville, Pottawatomie.
John Garret,	Centropolis, Franklin.
Elmer George Gibson,	Topeka, Shawnee.
Bert Waldron Green,	Manhattan, Riley.
Charles Shepard Green,	Manhattan, Riley.
Ellen Aurora Halstead,	Leonardville, Riley.
Walter Eugene Hardy,	Manhattan, Riley.
Myrtle Mary Harner,	Lasita, Riley.
Elizabeth Lynn Hartley,	Manhattan, Riley.
Lawrence Wilbur Hayes,	Manhattan, Riley.
Winfred Francis Hecox,	La Junta, *Colorado.*
Olga Dagmar Huber,	Meriden, Jefferson.
Christian Andrick Johnson,	Success, Russell.
Susan Effie Johnson,	Success, Russell.
Marian Elizabeth Jones,	Manhattan, Riley.
Thomas Lormar Jones,	Manhattan, Riley.
Maud Estella Kennet,	Silver Lake, Shawnee.
Fred. Linton Kinsey,	Crow, Phillips.
Mark Kirkpatrick,	Fredonia, Wilson.
Cortes Dawson Lesley,	Culver, Ottawa.
Myron Arthur Limbocker,	Manhattan, Riley.

Name.	*Post Office and County.*
Eugene Marshall,	Manhattan, Riley.
Samuel Alexander McDowell,	Manhattan, Riley.
Laura Sarah McKeen,	Manhattan, Riley.
Ward Cadwell Mead,	Maple City, Cowley.
James Edward Mercer,	Topeka, Shawnee.
Charles Milton Morgan,	Manhattan, Riley.
George Merrick Munger,	Eureka, Greenwood.
John Bitting Smith Norton,	White City, Morris.
Lillian Oldham,	Keats, Riley.
William Hackworth Painter,	Meade, Meade.
Elva Luthera Palmer,	Clifton, Clay.
Nellie M. Palmer,	Burlingame, Osage.
Charles Wesley Pape,	Topeka, Shawnee.
Ethel Patton,	Silver Lake, Shawnee.
John Vernon Patton,	Silver Lake, Shawnee.
Clarence Herbert Paul,	Waterville, Marshall.
Archie Carpenter Peck,	Big Valley, *Texas.*
Campbell Kenedy Peck,	Junction City, Geary.
Russell John Peck,	Big Valley, *Texas.*
Will Oscar Peterson,	Randolph, Riley.
William H. Phipps,	Chapman, Dickinson.
Charles Stephens Pope,	Cawker City, Mitchell.
Edgar Arthur Powell,	Osage City, Osage.
John Purcell,	Manhattan, Riley.
Alice Julia Quintard,	Silver Lake, Shawnee.
Maude Myrtle Quintard,	Silver Lake, Shawnee.
Ralph Waldo Rader,	Manhattan, Riley.
Ambrose Elliott Ridenour,	Manhattan, Riley.
Isaac Archie Robertson,	Manhattan, Riley.
Jennie Myrtle Romick,	Manhattan, Riley.
Benjamin Franklin Simeon Royer,	Sterling, Rice.
Gertrude Werden Shofe,	Manhattan, Riley.
Charles Ellsworth Shoup,	Russell, Russell.
Charles Wesley Shull,	Manhattan, Riley.
Asa Smith,	Osborne, Osborne.
Etta Smith,	Manhattan, Riley.
Frederick John Smith,	Iwacura, Clay.
Kitty Myrtle Smith,	Manhattan, Riley.
Carl Snyder,	Oskaloosa, Jefferson.
Bertha Julia Spohr,	Manhattan, Riley.
Bertha Anora Steele,	Minneapolis, Ottawa.
Anna Louise Stingley,	Manhattan, Riley.
Sadie Stingley,	Manhattan, Riley.
Fairy Strong,	Manhattan, Riley.
Cora Idella Stump,	Manhattan, Riley.
Miriam Esther Swingle,	Manhattan, Riley.
Frances Eleanor Thackrey,	Manhattan, Riley,
Martha E. Toothaker,	Kansas City, Wyandotte.
Elven Creveling Trembly,	Council Grove, Morris.
Corinne Tucker,	Clinton, Douglas.
Herbert Theron Van Patten,	Centralia, Nemaha.

Name.	*Post Office and County.*
Edwin H. Webster,	Yates Center, Woodson.
Olive Mabel Wilson,	Austin, *Illinois.*
Ora Gertrude Yenawine,	Manhattan, Riley.
Frank Yeoman,	La Crosse, Rush.

FIRST YEAR.

Emma Elizabeth Adams,	Manhattan, Riley.
Francis Marion Aiman,	Manhattan, Riley.
John Andrew Amnell,	Randolph, Riley.
Ida Anderson,	Alta Vista, Wabaunsee.
Arthur Smith Atkinson,	La Junta, *Colorado.*
Charles Antoine Bailey,	La Crosse, Rush.
Elsie Baird,	Dodge City, Ford.
Harry Hurst Banker,	Kuhnbrook, Marion.
John Andrew Banker,	Kuhnbrook, Marion.
Myrtle Baumgart,	North Cedar, Jefferson.
Ada Mae Baxter,	Myers Valley, Pottawatomie.
Agnes Baxter,	Myers Valley, Pottawatomie.
Jessie G. Bayless,	Yates Center, Woodson.
James Cameron Bayless,	Melvern, Osage.
Charles Henry Bell,	Greenleaf, Washington.
Roy J. Bell,	Yates Center, Woodson.
Otto Bentz,	Riley, Riley.
Lulu Pearl Berkshire,	Elmdale, Chase.
Walter S. Berkshire,	Elmdale, Chase.
Albert Gustavus Bittman,	Louisville, Pottawatomie.
Anna Blyth,	Keats, Riley.
Albert Booth,	Grand Summit, Cowley.
May Haines Bowen,	Manhattan, Riley.
Alie Robert Bradshaw,	Hoyt, Jackson.
John Henderson Braum,	Denison, Jackson.
McLeod Braum,	Denison, Jackson.
Sherman George Britton,	Section, Coffey.
Claude Milo Brobst,	Osborne, Osborne.
Rollins Foster Buck,	Big Springs, Douglas.
Ira Olen Butts,	Yates Center, Woodson.
Clyde Farley Caldwell,	Scandia, Republic.
Margaret Isaphene Carleton,	Scottsville, Mitchell.
Mary Frances Carnell,	Bunker Hill, Russell.
Samuel Stearson Cassidy,	Beattie, Marshall.
William Annesley Cavenaugh,	Ft. Supply, *Indian Territory.*
Clarence Asa Chandler,	Argentine, Wyandotte.
Sophronia Dell Channel,	Chalk Mound, Wabaunsee.
William Burns Chase,	Hoyt, Jackson.
Ella Clark,	Manhattan, Riley.
William Noah Coffey,	Manhattan, (Pottawatomie.)
Banner Stewart Coleman,	Menoken, Shawnee.
Harry Leonard Coleman,	Menoken, Shawnee.
Thadeus Colyer,	Millwood, Leavenworth.

Name.	*Post Office and County.*
Thomas Henry Coman,	Scammonville, Cherokee.
Laura Viola Condray,	Manhattan, Riley.
William George Cooper,	Russell, Russell.
Minnie Laura Copeland,	Quenemo, Osage.
Maggie A. Correll,	Overbrook, Osage.
Willett Ranson Correll,	Overbrook, Osage.
Charlotte Mabel Cotton,	Wabaunsee, Wabaunsee.
Myrtle Evelyn Coulman,	Alta Vista, Wabaunsee.
Charles Ferdinand Curs,	Waterville, Marshall.
Ora L. Davisson,	Montrose, Jewell.
Mrs. Dora Ann Dawson,	Yates Center, Woodson.
Elizabeth Denton,	Cleburne. Riley.
Fred Volley Dial,	Cleburne, Riley.
George McCutcheon Dick,	Ellsworth, Ellsworth.
Robert Peter Dickson,	Fulton, Jackson.
Charles Francis Doane,	Louisville, Pottawatomie.
Frank Burton Dodds,	Idana, Clay.
Leanna Mabelle Dodge,	Manhattan. Riley.
Christopher Dolby,	Athelstane. Clay.
Samuel Dolby,	Ashelstane, Clay.
Edgar Terry Doom,	Manhattan. Riley.
John Berthold Dorman,	Manhattan, Riley.
Bradford Dougherty,	Kansas City, Wyandotte.
Harvey Tom Doyle,	Leonardville, Riley.
Della Drollinger,	Garrison, Pottawatomie.
Lillie Eakin,	Manhattan. Riley.
Anna Laura Edwards,	Burdick. Morris.
Marshall Columbus Edwards,	Vinton. Cowley.
Edwin Amos Eggleston,	El Reno, *Oklahoma Territory.*
James Riley Eichar,	Oakland, Shawnee.
Alonzo Lawrence Eidson,	West Plains, Meade.
James Hardy Elem,	Burrton, Harvey.
Bronta Elmer Ellis,	Grand Summit, Cowley.
Eugene Emrick,	Lone Tree, *Missouri.*
Agnes Helen Esdon,	Olsburg, Pottawatomie.
Harriet Maria Esdon,	Olsburg, Pottawatomie.
Charles Silas Evans,	Denison, Jackson.
Alma Rebecca Eyster,	Barnes, Washington.
Don Scott Farman,	Manhattan, Riley.
Mabel Nancy Farwell,	Osborne, Osborne.
William H. Fay,	Portis, Smith.
Jesse Martin Fengel,	Woodbine, Dickinson.
Marquis C. Findley,	Morland, Graham.
Emma Susan Finley,	Manhattan, Riley.
Frederick Edward Finley,	Parallel, Washington.
George William Finley,	Manhattan, Riley.
James Webster Finley,	Goodland, Sherman.
Minnie Charlotte Finley,	Parallel, Washington.
Antonette Ella Fisher,	Manhattan, Riley.
Howard Irwin Floyd,	McCracken, Rush.
Rollie Randle Forsyth,	Carbondale, Osage.

Name.	*Post Office and County.*
Walter Scott Forsyth,	Carbondale, Osage.
Martha Fox,	Manhattan, Riley.
Philip Fox,	Manhattan, Riley.
Alexander J. Fraser,	Peabody, Marion.
Edward Milton Frowe,	Louisville, Pottawatomie.
John Jacob Fryhofer,	Randolph, Riley.
August E. Fuhlhage,	Myra, Woodson.
Harris Rishel Gilbert,	Lincolnville, Marion.
Claud Marion Gilleece,	Denison, Jackson.
Allie Gilliford,	Olsburg, Pottawatomie.
Andrew Burt Ginter,	Valley Falls, Jefferson.
Morris Hopper Ginter,	Valley Falls, Jefferson.
George McClung Green,	Manhattan, Riley.
Ned Merrill Green,	Manhattan, Riley.
Charles D. Griffee,	Alden, Rice.
Ralph Edson Grimes,	Byron, Woodson.
George Caleb Grisier,	Yates Center, Woodson.
Anna Winter Hall,	Manhattan, Riley.
George Clifton Hall,	Hoyt, Jackson.
William Logan Hall,	Anthony, Harper.
John George Haney,	Courtland, Republic.
Rose Hardy,	Manhattan, Riley.
Florence Harling,	Manhattan, Riley.
Helen Harrison,	Manhattan, Riley.
Ephraim J. Hartzler,	Goodland, Sherman.
Nannie Elizabeth Hartzler,	Goodland, Sherman.
James Madison Harvey, jr.,	Junction City, Geary.
Alonzo Charles Havens,	Dwight, Morris.
Gertrude Julia Havens,	Dwight, Morris.
Edmond Hays,	Osborne, Osborne.
Reuben William Henney,	Sabetha, Nemaha.
Lottie Elizabeth Henry,	Lincoln, Lincoln.
Clarence Hepler,	Manhattan, Riley.
John Morris Hibner,	Riley, Riley.
Maggie Eva Hibner,	Leonardville, Riley.
William Samuel Hiestand,	Yates Center, Woodson.
Forrest Hill,	Emporia, Lyon.
Henry Covel Holderman,	Chetopa, (*Indian Territory.*)
Cage Holford.	Manhattan, Riley.
John Warren Holland,	Cokeville, *Wyoming.*
Louis Pettigrew Holland,	Garden Plains, Sedgwick.
Ina Emma Holroyd,	Manhattan, Riley.
Clarence Franklin Hood,	Manhattan, Riley.
Myrtle Hattie Hood,	Manhattan, Riley.
Mabel Clair Hooker,	Manhattan, Riley.
Charles Henry Hoop,	Manhattan, Riley.
Stella May Hougham,	Manhattan, Riley.
Edward Leonard Hougham,	Manhattan, Riley.
Winifred Anna Houghton,	Manhattan, Riley.
Ralph John Wesley Howard,	Manhattan, Riley.
Carrie Elva Hoyt,	Bennington, Ottawa.

Name.	*Post Office and County.*
Bret Redmon Hull,	Alta Vista, Wabaunsee.
John A. Hunter,	Eskridge, Wabaunsee.
Lena Bertha Jackson,	Garrison, Pottawatomie.
Lula Maud Jackson,	Garrison, Pottawatomie.
Emma Jacobs,	Monterey, Riley.
Annie Laurie James,	Wagoner, *Indian Territory.*
Charles Edward John,	Grand Summit, Cowley.
Carrie Grace Johnson,	Myers Valley, Pottawatomie.
Henry George Johnson,	Assaria, Saline.
Edward Clarence Joss,	Fairview, Brown.
Olive Jane Kearns,	Manhattan, Riley.
Royal S. Kellogg,	Fay, Russell.
Orlin Sereno Kenyon,	Concordia, Cloud.
Richard Beaver Kerr,	Salina, Saline.
John Milton Kimball,	Manhattan, Riley.
Udah Sheldon King,	Vinland, Douglas.
Byron Kirkpatrick,	Fredonia, Wilson.
Charles Roland Kistler,	Waterville, Marshall.
Carl Klemp,	Topeka, Shawnee.
Christy Breniser Knox,	Manhattan, Riley.
Charles Herbert Lantz,	Manhattan, Riley.
Edith Lynnette Lantz,	Manhattan, Riley.
John Edward Larrick,	Logan, Phillips.
Daniel Seward La Shelle,	Chepstow, Washington.
Francis Lawlor,	Wakarusa, Shawnee.
Hilda Margaret Leicester,	Manhattan, Riley.
Charles E. Lewis,	Yates Center, Woodson.
Samuel Herbert Little,	Utopia, Greenwood.
Flora Estella Livings,	Manhattan. Riley.
Owsley Lonergan,	Marysville, Marshall.
Susie Long,	Manhattan, Riley.
Charles Willard Longenecker,	Paola, Miami.
John Alexander Lovett,	Crescent, Kiowa.
Charles W. Lyman,	Manhattan, Riley.
Clifford Lyon,	Sabetha, Nemaha.
Dora W. Maas,	Alma, Wabaunsee.
August Fred. Mangelsdorf,	Atchison, Atchison.
Charles Sumner Marty,	Glenn, Johnson.
Charles Matter,	Manhattan, Riley.
Josie McCandless,	Hutchinson, Reno.
J. Park McCandless,	Cottonwood Falls, Chase.
Albert Wilbore McClurkin,	Clay Centre, Clay.
Elvin Harvey McClurkin,	Clay Centre, Clay.
Frank Everett McCord,	Manhattan, Riley.
William Andrew McCullough,	Delavan, Morris.
Nannie Catherine McCullough,	Delavan, Morris.
William Dio McPhee,	Anthony, Harper.
Bert Ulysses Medaris,	Manhattan, Riley.
Winfred Medaris,	Manhattan, Riley
Frederick Hugo Meyer,	Menager, Wyandotte.
Clement Studebaker Milburn,	Merriam, Johnson.

Name.	*Post Office and County.*
Charles Clifton Miller,	Athelstane, Clay.
Harvey Robert Miller,	Wabaunsee, Wabaunsee.
John D. Miller,	Athelstane, Clay.
William S. Miller,	Anthony, Harper.
Jessie Minis,	Manhattan, Riley.
James Spauldine Monahan,	Manhattan, Riley.
Bernard Orlando Moore,	Irving, Marshall.
Mrs. Elda Lenore Moore,	Manhattan, Riley.
William Moore,	Brookville, Saline.
Arthur H. Morgan,	Hillside, Phillips.
Melvin Louis Morgan,	Argentine, Wyandotte.
James Morris,	Wetmore, Nemaha.
William Mueller,	Lanham, *Nebraska.*
Clarence Lea Myers,	Holton, Jackson.
Maud Anna Naylor,	Alta Vista, Wabaunsee.
Esther Malvina Nelson,	Bennington, Ottawa.
Louis Anthony Nelson,	Marysville, Marshall.
Clara Verena Newell,	Manhattan, Riley.
Sherman Bodwell Newman.	Zeandale, Riley.
Orien James Newlin,	Coldwater, Comanche.
Hans Peter Nielson,	Denmark, Lincoln.
Ella Nixon,	Manhattan, Riley.
Olive Esra Noble,	Riley, Riley.
Guy Brunaugh Norris,	Garden City, Finney.
Ellen Elizabeth Norton,	White City, Morris.
Mary Augusta Norton,	White City, Morris.
Ella Myrtle Noyes,	Wabaunsee, Wabaunsee.
Bertha Olivia Olson,	Manhattan, Riley.
George O'Niell,	Milo, Lincoln.
Jesse Landes Overholser,	Russell, Russell.
Albert Alden Paige,	Manhattan, Riley.
Mary Kerrilli Painter,	Meade, Meade.
Mabel Palmer,	Burlingame, Osage.
Nellie Christena Palmer,	Burlingame, Osage.
Fannie Parkinson,	Pomona, Franklin.
Gale Partridge,	Sabetha, Nemaha.
Llola Idela Patterson,	Manhattan, Riley.
John Henry Payne,	Burrton, Harvey.
Clara Jane Pender,	Pueblo, *Colorado.*
Arthur Lewis Peter,	Oakland, Shawnee.
Hans Christian Peterson,	Greenleaf, Washington.
Emma Frances Phelps,	Briggs, Geary.
Eva Louise Philbrook,	Chepstow, Washington.
Rufus M. Philbrook,	Chepstow, Washington.
William Erastus Phillips,	Capioma, Nemaha.
Alexander Calvin Pike,	Westmoreland, Pottawatomie.
Charles Edwin Pincomb,	Glenn, Johnson.
Mary Josephine Pincomb.	Glenn, Johnson.
J. Arthur Plowman,	Jewell City, Jewell.
Edna Alice Pollom.	Louisville, Pottawatomie.
John Poole,	Briggs, Geary.

Name.	*Post Office and County.*
Willis Thomas Pope,	Lincolnville, Marion.
Ernest Poston,	Netawaka, Jackson.
George Orlin Potts,	Ada, Ottawa.
Mary B. Pritner,	Grant, Riley.
Lisle Willetts Pursel,	Columbus, Cherokee.
Annie Elizabeth Putnam,	Athelstane, Clay.
Llewellyn Victor Putnam,	Athelstane, Clay.
Hiram Mater Rasmussen,	Morganville. Clay.
Charles Duncan Rees,	Delphos, Ottawa.
May Bell Rehfeld,	Manhattan, Riley.
Benjamin Perry Remy,	Manhattan, Riley.
Joe Reyburn,	Leavenworth, Leavenworth.
Leah Reyburn,	Leavenworth, Leavenworth.
Howard Newton Rhodes,	Manhattan, Riley.
Abba Rice,	Manhattan, Riley.
Carl Rice,	Manhattan, Riley.
John Henry Rice,	Manhattan, Riley.
Frank Ledgedwood Richardson,	Grand Summit, Cowley.
Falix Reinhold Richter,	Oskaloosa, Jefferson.
Jennie Florence Ridenour,	Manhattan, Riley.
John Beach Ridenour,	Snyder, Ford.
Mary Etta Ridenour,	Manhattan, Riley.
Lettie Edith Rigney,	Manhattan, Riley.
Stanley Robbins,	White City, Morris.
Norman S. Roberts,	Manhattan, Riley.
Thomas Mead Robertson,	Manhattan, Riley.
Homer Joseph Robison,	Yates Center, Woodson.
Harry Clark Rogers,	Randall, Jewell.
Pearl Albro Rogers,	Burlingame, Osage.
Fred. Rowland,	Eskridge, Wabaunsee.
Fritz Rummel,	Hartford, Lyon.
Milton Edgar Sargent,	Riley, Riley.
Daniel T. Schorer,	Morganville, Clay.
Grace Anna Secrest,	Randolph, Riley.
William Haskell Serviss,	Kansas City, Wyandotte.
James Marshall Shearer,	Frankfort, Marshall.
Stella Alice Shippen,	Pence City, Scott.
Alice Myrtle Shofe,	Manhattan, Riley.
Benjamin Franklin Shonyo,	Bushton, Rice.
Emma Elmira Shull,	Manhattan, Riley.
Corydon Allen Sigman,	Manhattan, Riley.
Ida Maud Sisco,	Watervilie, Marshall.
Alfred Caleb Smith,	Manhattan, Riley.
Bruce Smith,	Niles, Ottawa.
Edwin Lee Smith,	Manhattan, Riley.
Frank Eldon Smith,	Bloomington, Osborne.
Oliver Russell Smith,	Manhattan, Riley.
Phœbe Jane Smith,	Manhattan, Riley.
Valdo Smith,	Manhattan, Riley.
Max Gilbert Spalding,	Eureka, Greenwood.

Name.	*Post Office and County.*
Louise Mary Spohr,	Manhattan, Riley.
Eva Electa Staley,	Oklaunion, *Texas.*
Carrie Jane Staver,	Dallas, *Missouri.*
Daniel Morgan Steele,	Dallas, *Missouri.*
Orville Ashford Stingley,	Manhattan, Riley.
Charles Harrison Stokely,	Burlingame, Osage.
Charles Leslie Straight,	Bennington, Ottawa.
Gertrude Ella Stump,	Manhattan, Riley.
Andrew B. Symns,	Brenner, Doniphan.
Cora Gertrude Thackrey,	Manhattan, Riley.
Henry Marsden Thomas,	Melvern, Osage.
John Zachariah Thomas,	Melvern, Osage.
Louis James Thompson,	Garden Plains, Sedgwick.
Emma Tidler,	Olsburg, Pottawatomie.
Charles Madison Tissue,	Partridge, Reno.
James Gillis Tomson,	Dover, Shawnee.
Wilbur Sewall Trader,	Manhattan, Riley.
James Dunbar Trumbull,	Manhattan, Riley.
Elizabeth C. Tunnell,	Wichita, Sedgwick.
Frank Edwin Uhl,	Gardner, Johnson.
Charles Thomas Vale,	Alton, Osborne.
Mattie M. Vale,	Alton, Osborne.
Ada Van Gaasbeck,	Alta Vista, Wabaunsee.
Thomas P. Van Orsdal,	Silver Lake, Shawnee.
Bert Winfred Vickery,	Waterville, Marshall.
Bessie Voiles,	Manhattan, Riley.
Hilda Walters,	Manhattan, Riley.
Lucy Ward,	Wetmore, Nemaha.
Gertie May Warner,	Upper Sandusky, *Ohio.*
Elsie L. Waters,	Weston, Geary.
John Minton Westgate,	Westgate, Geary.
Ira Lee Westover,	Formosa, Jewell.
Willard Whitford,	Manhattan, Riley.
Elmer Wiant,	North Topeka, Shawnee.
Louise Clara Weist,	Manhattan, Riley.
Virgil Franklin Winslow,	Wakefield, Clay.
John Wootton,	Toronto, Woodson.
James M. Wright,	Denison, Jackson.
Mary Alice Wright,	Denison, Jackson.
Courtland Voorhees Wyckoff,	Wyckoff, Lyon.
Albert August Yousse,	Colby, Thomas.
Frederick Zimmerman,	East Norway, Doniphan.

SUMMARY.

	Gentlemen.	*Ladies.*	*Total.*
Post graduate	14	15	29
Fourth year	28	15	43
Third year	41	25	66
Second year	75	35	110
First year	228	111	339
Totals	386	201	587

From 68 counties of Kansas, 555.

From 16 other States, 32.

Applicants not enrolled, 14.

Objects and Methods.

THE ENDOWMENT AND RESOURCES.

An act of Congress approved July 2, 1862, gave to each State public lands to the amount of 30,000 acres for each of the Senators and Representatives in Congress according to the census of 1860, for the "endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Under this act, the State of Kansas received 82,313.53 acres of land, and, in 1863, established the State Agricultural College, by endowing with these lands Bluemont College, which had been erected two miles from Manhattan, under the auspices of the M. E. Church, but was presented to the State for the purpose named in the act of Congress.

In 1873, the College was reorganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 219 acres, one mile from the city of Manhattan. On this fine location the State has provided buildings valued at $135,000, and has this year increased such provision by $74,000, making the total amount invested in buildings about $210,000; of these a description is given elsewhere. The farm and grounds, furniture, stock, and other illustrative apparatus, are valued at $150,000. The present value of buildings, grounds, apparatus, etc., is almost exactly equal to the sum of all appropriations by the State. All the lands have been sold, giving a fund of $502,927.35, which is by law invested in bonds, the interest alone being used for the current expenses of the College.

The annual income from the endowment fund — about $30,000 — is supplemented by an appropriation under an act of Congress approved August 30, 1890, of $15,000 for 1890, $16,000 for 1891, $17,000 for 1892, and a sum increasing each year by $1,000 until the annual amount shall be $25,000. This fund is "to be applied only to instruction in agriculture, the mechanic arts, and the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." "No portion of said moneys shall be applied directly or indirectly, under any

KANSAS STATE AGRICULTURAL COLLEGE. (General View.)

pretense whatever, to the purchase, erection, preservation or repair of any building or buildings."

All expense of instruction is thus provided for, and the State is left to erect and maintain the necessary buildings and meet expenses in management of the funds.

Under an act of Congress approved March 7, 1887, the College receives, by general appropriation in Congress, $15,000 each year for the maintenance of an Experiment Station, "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The property of the Station, including a building erected especially for its use, amounts to more than $10,500.

OBJECTS.

This College now accomplishes the objects of its endowment in several ways

First, It gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second, It teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, botany, entomology, zoölogy and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science; and all are enforced by actual experiment.

Third, It trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household departments is made a part of a general education to usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth, It strives to increase our experimental knowledge of agriculture and horticulture. The provision for extensive and accurate researches, made by establishing the Experiment Station as a distinct department of the College, offers assurance of more definite results than can be obtained by ordinary methods. The Professors of Agriculture, Horticulture, Chemistry, Botany, and Veterinary Science, together with the President of the College, form the Experiment Station Council, by authority of which experiments are undertaken and carried on in the several departments, under the special supervision of the professors. These touch "the physiology of plants and animals; the diseases to which they are severally subject, with remedies f r the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

The bulletins of the Station, issued at least as often as once in three months, are sent, according to law, free of postage, to all newspapers in the State, and "to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." Correspondence with reference to bulletins and experiments is welcomed, and may be addressed to the several members of the Council.

Fifth, It seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose, farmers' institutes have been organized in more than 40 counties of the State, in which from two to four members of the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers and their families. These institutes, held for the past 12 years, have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented. The members of the Faculty desire correspondence as to farmers' institutes or any questions of practical interest in agriculture or related sciences. The *Industrialist,* published weekly, and edited by Faculty and students, gives a wide circulation to matters of similar interest in the College.

To serve a similar end, a course of 30 lectures is given at the College during two weeks in February of each year, to which farmers from all parts of the State are invited. Members of the Faculty are also prominently connected with State associations for the promotion of agriculture, horticulture, the natural sciences, and education in general.

COURSE OF STUDY.

The necessity for so adjusting various branches of a course of study that there shall be as little waste as possible in acquiring both information and discipline, is felt by every teacher. Such a course is not designed to be absolutely inflexible, but to guide the judgment into some definite line of progress from which no mere whim shall turn a student aside.

Each student is expected to take three studies, besides one hour's daily practice in an industrial art; and variations from this rule can be made only with the consent of the Faculty.

Parallel courses are offered to both sexes, with such differences as their ne-

STUDENTS AT WORK IN THE GARDENS.

cessities seem to call for. The following gives the general scope of the two, but fuller explanations are found under "Outline of Instruction:"

FIRST YEAR.

Fall Term.....Algebra.
English Analysis.
Geometrical Drawing.
Industrial.

Winter Term..Algebra.
English Composition.
Bookkeeping.
Free-hand Drawing three times a week.
Industrial.

Spring Term...Algebra.
English Structure.
Botany.
Industrial.

SECOND YEAR.

Fall Term.....Geometry.
Elementary Chemistry.
Horticulture.
Industrial.

Winter Term..Geometry completed, Projection Drawing.
Agriculture, for young men.
Household Economy, for young women.
Organic Chemistry and Mineralogy.
Twelve Lectures in Military Science.
Industrial.

Spring Term...Anatomy and Physiology.
Entomology.
Analytical Chemistry.
Twenty Lectures in Military Science.
Industrial.

THIRD YEAR.

Fall Term.....Trigonometry and Surveying.
Agricultural Chemistry.
General History.
Industrial.

Winter Term..Mechanics.
Political History and Civil Government.
Rhetoric.
Industrial.

Spring Term...Civil Engineering, for young men.
Hygiene, for young women.
Physics.
English Literature.
Perspective Drawing two hours a week; Drafting two hours.
Industrial.

FOURTH YEAR.

Fall Term.....Agriculture, for young men.
Literature, for young women.
Physics and Meteorology.
Psychology.
Industrial.

Winter Term..Logic, Deductive and Inductive.
Zoölogy.
Structural Botany.
Veterinary Science, for young men.
Floriculture, for young women.
Industrial.

Spring Term...Geology.
Political Economy.
An elective in Agriculture, Horticulture, Mechanics, or related sciences.
Industrial.

INDUSTRIAL TRAINING.

Closely adjusted to the course of study is industrial training in several of the arts, to which each student is required to devote at least one hour a day. Among the lines of training each student may select, with the approval of the Faculty, except in terms when special industrials are required. Young men may have farming, gardening and fruit growing, woodwork and ironwork, or printing. Young women may take cooking, sewing, printing, floriculture, or music.

All young men must have their industrials for one term in the carpenter shop before completing the first year; and during the spring term of the second and the fall term of the third year, upon the farm, garden, and orchards. Young women take their industrial for one term of the first year in sewing, and for the winter and spring terms of the second year in the kitchen laboratory and dairy.

THE DAILY ROUTINE

requires chapel at 8:30 A.M., and classes from 8:50 A.M. to 1 P.M., as shown under "Class Hours." Class rhetorical exercises are held weekly. Military drill is twice a week. On every Friday afternoon, at 1:30, all attend the public lecture or rhetorical exercises in chapel.

SPECIAL COURSES.

Persons of suitable age or advancement who desire to pursue such branches of study as are most directly related to agriculture or other industries may select such studies under the advice of the Faculty. Assaying may be provided for by special arrangement, when students are qualified to pursue it.

IRON AND WOOD WORKSHOPS

CLASS HOURS, 1893-'94.

	HRS.	SPECIAL CLASSES.			FIRST YEAR.				
FALL TERM. 14 weeks.	I.	Writing.	Drawing.	Industrial.	Algebra.	English Analysis.	Algebra.	Industrial.	Geometrical Drawing.
	II.	Industrial.		Geography.	English Analysis.	Algebra.	Industrial.	Geometrical Drawing.	English Analysis.
	III.	English.	Arithmetic.		Geometrical Drawing.	Industrial.		English Analysis.	Algebra.
	IV.		Industrial.	English.	Industrial.	Geometrical Drawing.	English Analysis.	Algebra.	Drill and Rhetoricals.
	V.	Arithmetic.	English.	Arithmetic.	Drill and Rhetoricals.	Drill and Rhetoricals.	Geometrical Drawing.	Drill and Rhetoricals.	Industrial.
WINTER TERM. 12 weeks.	I.	English.	Industrial.	Geometrical Drawing.	Free-hand Drawing.	Bookkeeping.	Industrial.	English Structure.	Algebra.
	II.		U. S. History.		Bookkeeping.	Industrial.	English Structure.	Algebra.	Free-hand Drawing.
	III.	Industrial.	Arithmetic.	Algebra.	Industrial.	English Composition.	Algebra.	Free-hand Drawing.	Bookkeeping.
	IV.	Writing.	English Grammar.	Industrial.	English Structure.	Algebra.	Free-hand Drawing. Drill.	Bookkeeping.	English Composition.
	V.	Arithmetic.		English Analysis.	Algebra.	Free-hand Drawing. Drill.	Bookkeeping.	Industrial.	Industrial.
SPRING TERM. 11 weeks.	I.	Industrial.	Arithmetic.	Algebra.	Free-hand Drawing.	Algebra.	Botany.	Industrial.	English Structure.
	II.		English.	Industrial.	Algebra.	Botany.	Industrial.	English Composition.	Algebra.
	III.	Arithmetic.	U. S. History.	Bookkeeping.	Industrial.	Industrial.	English Structure.	Algebra.	Botany.
	IV.	English.	Industrial.	English.	English.	English Composition.	Algebra.	Botany.	Industrial.
	V.	Writing.		Free-hand Drawing.	Drill and Rhetoricals.				

CLASS HOURS, 1893–'94—Continued.

	HRS.	SECOND YEAR.				THIRD YEAR.		FOURTH YEAR.	
FALL TERM. 14 weeks.	I.	Entomology.	Industrial.	Industrial.	Geometry.	Agricultural Chemistry.		Logic.	Industrial.
	II.	Chemistry.	Horticulture.	Geometry.	Industrial.	General History.	Trigonometry and Surveying.	Agriculture.	Literature.
	III.	Chemical Practice. Rhetoricals.	Geometry.	Chemistry.	Horticulture.	Trigonometry and Surveying.	Surveying Practice. Industrial.	Physics.	Psychology.
	IV.	Geometry.	Chemistry.	Entomology.	Chemical Practice. Rhetoricals. Drill.	Surveying Practice. Industrial.	General History.	Industrial.	Physics.
	V.	Industrial.	Chemical Practice. Rhetoricals.	Chemical Practice. Rhetoricals. Drill.	Chemistry.	Surveying Practice. Rhetoricals. Drill.		Rhetoricals.	
WINTER TERM. 12 weeks.	I.	Agriculture.	Physiology.	Household Economy.		Industrial.	Rhetoric.	Industrial.	Logic.
	II.	Organic Ch'mistry. Blowpipe.	Drawing. Geometry.	Blowpipe. Organic Ch'mistry.	Geometry. Drawing.	Rhetoric.	Mechanics.	Psychology.	Botany.
	III.	Industrial.	Organic Ch'mistry. Blowpipe.	Industrial.	Blowpipe. Organic Ch'mistry.	Mechanics.	Political History and Civics.	Zoölogy.	
	IV.	Drawing. Geometry.	Industrial. Mineralogy.	Geometry. Drawing.	Mineralogy. Industrial.	Political History and Civics.	Industrial.	Veterinary Science.	Floriculture.
	V.	Military Science. Mineralogy.	Military Science. Industrial.	Mineralogy. Military Science.	Industrial. Military Science.	Rhetoricals. Drill.	Rhetoricals. Drill.	Botany.	Industrial.
SPRING TERM. 11 weeks.	I.	Horticulture.	Agriculture.	Analytical Chemistry.		English Literature.	Industrial.	Political Economy.	
	II.	Physiology.	Entomology.			Engineering.	Hygiene.	U. S. Constitution.	
	III.	Analytical Chemistry.		Physiology.	Entomology.	Physics.	English Literature.	Geology.	
	IV.			Horticulture.	Physiology.	Drawing. Rhetoricals.	Physics.	Industrial.	
	V.	Military Science. Drill.		Dairying. Rhetoricals.		Industrial.	Drawing. Rhetoricals.	Rhetoricals. Drill.	

Benedict-Eng Chi

SHORT LECTURE COURSE FOR FARMERS.

Beginning on the first Tuesday of February each winter, a two-weeks course of lectures is given on agriculture and related arts and sciences. This is provided for those farmers and others who cannot take up the fuller work of the regular College classes. Members of the Faculty are assisted in delivering these lectures by prominent farmers, stock raisers and fruit growers of the State; and full discussions of the topics presented bring out the varied experiences of those attending. This course, during the winter of 1893, was attended by about 40 farmers.

POST-GRADUATE COURSES.

Arrangements can be made for advanced study in the several departments at any time, and outlines of courses will be furnished on application. Special opportunities for investigation and research will be afforded at all times to resident graduates in agriculture and agricultural chemistry, physics and chemistry, horticulture and botany, zoölogy and entomology, mathematics, engineering, and drafting. Every facility for advancement in the several arts taught at the College will be given such students, though they are not required to pursue industrial training while in these courses.

DEGREES.

The degree of Bachelor of Science is conferred upon students who complete the full course of four years and sustain all the examinations. This degree entitles the holder to credit for studies pursued in any application for State teacher's certificate. (See act of Legislature approved March 11, 1893.)

The degree of Master of Science is conferred in course upon graduates who comply with the following conditions:

1. Each candidate shall furnish evidence satisfactory to the Faculty of proficiency in at least one of each of the groups of arts and sciences here named:

ARTS.

Agriculture.
Horticulture.
Engineering.
Architecture and Designing.
Domestic Economy.

SCIENCES.

Botany.
Chemistry.
Zoölogy.
Entomology.
Physics.

2. Each candidate must present for consideration by the Faculty a satisfactory thesis, involving original researches in line with one or the other of the courses pursued as above, and shall deposit a perfect copy in the College library.

3. Application to the Faculty for sanction of the lines of study and research selected should be made as early as the first day of November, and the subject of the thesis must be settled upon as soon as the first day of January preceding the Commencement at which the degree is expected.

4. Candidates must be from graduates of three or more years' standing, unless a post-graduate course of one year or more has been pursued at this

College, in which case the second degree may be conferred two years after graduation.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of MASTER OF SCIENCE may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the Master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

2. His post-graduate study shall have been in line with that required of graduates of this College, as published in our catalogue.

3. He must make application for the degree on or before the first day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1 an abstract of the thesis must be submitted to the Faculty.

5. Before May 15 the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

OUTLINE OF INSTRUCTION.

Agriculture.

Second Year.—History of agriculture, showing the successive steps by which the art has attained its present position. History and characteristics of breeds: Their adaptation to the varying conditions of soil, climate, and situation; study of the forms of animals, as shown by the different breeds belonging to the College; the relation of stock raising to general farming. Cultivation of hoed crops; management of corn and roots with reference to stock feeding, and the growth of the finer grains. The growth of the tame grasses in Kansas: The best sorts for the State, and their management, as shown by experience upon the College farm and elsewhere. Implements of simple tillage: Mechanical principles involved in their construction. Application of labor. Draught: Different adjustments as affecting draught. Plows for soil and subsoil. Drainage: Soils that need drainage; how to lay out a system of drains.

Fourth Year.—General principles governing the development of domestic animals: The laws of hereditary disease—of normal, abnormal and acquired characters; atavism; correlation in the development of parts; in-and-in breeding and crossbreeding; influences affecting fecundity. The selection and arrangement of the farm with reference to the system to be pursued. Rotation of crops: General advantages of a rotation; the best rotation for the distribu-

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STUDENTS JUDGING THE DAIRY CATTLE.

tion of labor, production of manure, and extermination of weeds. Planning farm buildings — barns, piggeries, and stables. Manure: How best housed and applied; composting; commercial fertilizers. Agricultural experiments; field and feeding experiments. Stock feeding and meat production: Stall feeding; soiling.

Horticulture.

It is the aim to teach this art from a botanical basis. The student applies his knowledge of the prime facts in botanical physiology to the various operations of the nursery, orchard, and farm. Instruction is given by a series of lectures upon the following topics, among others: The scope of horticulture. General principles of propagation — by buds, by seeds. Production of improved varieties — by careful selection of seeds, by interfertilization of known kinds. Perpetuation of valuable sorts of fruits by bud propagation — budding, grafting, layering, etc. The important points in nursery manipulation. The orchard: Conditions of site, soil, exposure, elevation; special treatment of different kinds of fruit trees; pruning; gathering and storing fruits. Small-fruit culture: List of varieties suitable for Kansas planting. Vegetable garden: Selection and preservation of seeds; planting and transplanting; the management and use of hotbed and cold frame. Forest plantations. Windbreaks. Hedges. Trees and shrubs for ornamental planting.

In the winter term of the fourth year, the young women study "Floriculture," the subject including general greenhouse management; the treatment of plants in window gardening, the growing of flowering plants in the open air, the destruction of plant pests, etc.; practice in the plant houses alternating with lectures on these topics.

Entomology.

This science is studied with special reference to its economic relations with agriculture and horticulture. A brief course in the principles of classification is followed by a more extended study of the life history of beneficial and injurious insects, and means for encouragement of the one and for control of the other.

The instruction is presented in the form of lectures. Illustrations are furnished from the individual collections of the students, and from the entomological collections belonging to the College. Charts and drawings from nature are used to illustrate points of value in classification. The pocket lens used in botany is required in this study.

Botany.

During the College course two terms are given to the study of botany.

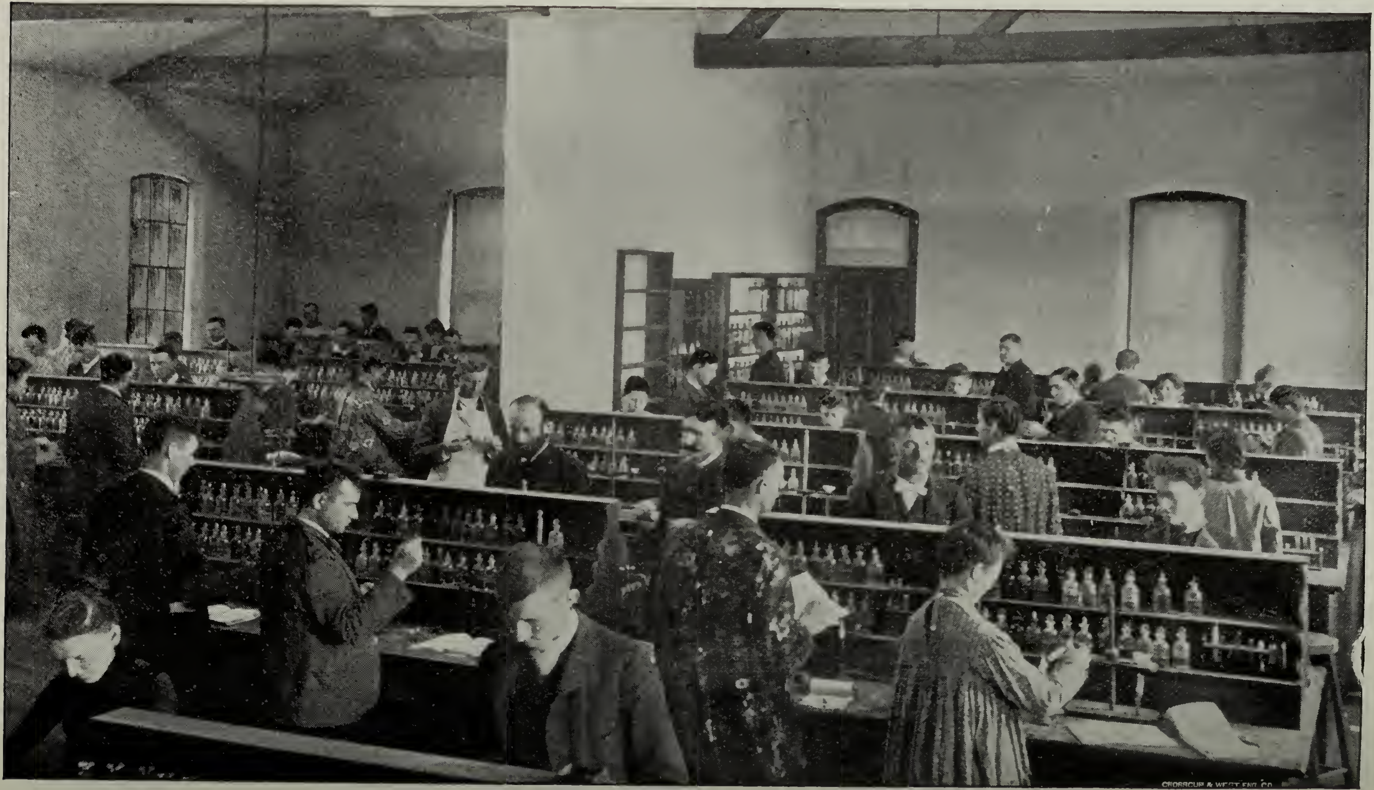
Elementary Botany.— Instruction in this branch is given during the spring term of the first year. The text-book used is Gray's New Lessons in Botany. This is supplemented by daily field work, which in the main runs parallel with the text-book. The aim in the field work is to teach the student how to observe, and how to draw conclusions from his observations. The following are a few of the subjects studied: Germination of corn, bean, or other common seed; opening of buds; falling of leaves; various fruits and their adaptations for dissemination; pollination and adaptations for cross fertilization. These notes and observations, together with the necessary drawings, are submitted from time to time for examination and criticism. In addition to this, each student prepares a herbarium of not less than 50 species of native plants. These are named by the aid of Gray's Manual of Botany, sixth edition. The students are required to carefully analyze a number of flowers, and to fill out special blanks furnished for the purpose, and also to provide themselves with a pocket lens, under the direction of the professor in charge.

Advanced Botany.— In the winter term of the fourth year, the minute structure of plants, as well as vegetable physiology, is studied more fully. This includes an examination of the vegetable cell, its parts, modifications, and of tissue as presented in its various forms. This is made the basis for more detailed work on special subjects, among which may be mentioned germination, development of tissues, protoplasm, starch, parasitic fungi — especially the molds, smuts, rusts, etc., and other cryptogamic plants. Each student has the use of a compound microscope, with the necessary tools and reagents. While this course is intended primarily to furnish a foundation for applied botany in horticulture and agriculture, it also affords, especially when taken a second term as an elective study, the advantages of systematic observation and original investigation. A good herbarium and a large greenhouse are drawn upon for material for study.

Chemistry.

The study of chemistry occupies 44 weeks. Fourteen weeks are first given to *Inorganic Chemistry.* In this the elementry principles of the science are studied, with special reference to familiarizing the student with the essential phenomena of chemical action. Combination by weight and by volume; formation of bases, acids, and salts, and the relations existing between them; systematic nomenclature and notation; the natural classification of the elements, based upon their properties — these, with careful study of the most important properties of the commoner elements, furnish the basis for the work. The facts studied are illustrated whenever practicable by experiments on the lecture table. In addition to this, each student gives two hours weekly to personal repetition of such experiments as can be performed with simple apparatus. Preparation of the elementary gases and a number of compounds, with experiments illustrating their properties, neutralization of bases and acids, and experiments illustrating the formation and stability of salts, are examples of the kind of work done by the students.

The course in *Organic Chemistry* extends over six weeks. This is taught by lectures in which the object is less a presentation of systematic organic chemistry than a study of the occurrence, manufacture and uses of the more important organic compounds met with in everyday life. In so far as the time and subjects will permit, however, the chemical relations existing be-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CHEMICAL LABORATORY, ANALYTICAL ROOM.

tween the various classes of compounds, and their relations to inorganic compounds, are set forth as simply and distinctly as possible. To facilitate this, the subjects are taken up systematically, the classification of Laubenheimer being adopted. The lectures are illustrated by experiments, but the students do no laboratory work in this connection.

The course which for convenience is designated *Analytical Chemistry* is not designed so much to perfect the student in analysis as to familiarize him with the properties, the resemblances and differences of the compounds of the various bases and acids. It is a course in experimental chemistry in which the regular methods of identification and separation of substances are used as a basis for the work. Each student has his own work table, with water, gas, regeants, etc., and works eight hours per week for 10 weeks. He is first given single salts of known composition, then simple known mixtures, and finally unknown substances, which may soluble or insoluble, simple or complex.

In addition to the laboratory work, the student is required to study carefully the nature of the chemical reactions which take place. Besides the small handbook used as a guide in the laboratory, students are expected to consult the larger works of reference. Two hours weekly are spent in the lecture room, in which the teacher conducts a quiz upon the subject and explains any obscure points. Throughout the term, the student is required to express by equations the reactions observed in the laboratory. The aim of the course is to unify and amplify the student's knowledge of general chemistry.

Agricultural Chemistry. Fourteen weeks of the course in chemistry are occupied by a study of the relations of chemistry to agriculture. This comes during the first term of the third year, immediately after the general course in chemistry. Some of the subjects studied are the breaking down of minerals and rocks into soils; erosion, transportation, and deposition; composition and classification of soils; the relations of plants to the constituents of the air, oxygen, nitrogen, water, carbon dioxide, ammonia; manures, their composition and use; green manuring; plowing, draining; the composition of grains and fodder plants; the principles of feeding; the chemistry of milk, butter, and cheese.

Mineralogy.

The common minerals are studied during six weeks of the winter term of the second year. One hour per day is given to recitations and to class-room study, and the same time to determination of minerals by their physical and blowpipe characters. A well-selected mineral collection is of daily use in this work.

Geology.

This includes a study of the igneous, atmospheric, aqueous and organic agents that have brought the earth to its present condition; the structure and arrangement of rocks; the order of succession in the strata of the earth's crust and in the life of the globe. Prominence is given to facts having an economic bearing, valuable mineral deposits in Kansas receiving special attention.

Anatomy and Physiology.

Human anatomy is made the basis of a thorough study in physiology and hygiene. This includes such subjects as: Digestion and food; circulation of the blood; respiration and ventilation; secretion and excretion; the nervous system; and the special senses. The course embraces, to some extent, comparative anatomy and physiology, affording preparation for the study of stock breeding, zoölogy, and veterinary science. Martin's Human Body is used as a text-book. Skeletons and an Azoux manakin, with charts and drawings, furnish the means of demonstration.

Zoölogy.

In this study, Orton's Zoölogy has been adopted as the text-book. The intention of the course is to familiarize the student with the characters of some type in each class, and then, by comparative study, with the chief modifications of the type chosen. Especial attention is given to comparative anatomy and physiology. A good collection of mammals, birds, reptiles, fishes, both mounted and alcoholic, a collection of invertebrates in alcohol, and a fine collection of conchological specimens, are among the means of illustration. Dissection and work with the microscope accompany tbe study.

Veterinary Science.

The 12-weeks course of lectures is adapted to wants of farmers and stockmen, and includes such topics as the following: Hygiene and nursing of sick and wounded stock; diseases of bone and their treatment; diseases of the circulation, respiratory and digestive systems, their causes, treatment, and prevention; surgical operations; difficult parturition; shoeing and lameness; veterinary dentistry; horse judging and examination for soundness; some contagious and infectious diseases; their nature and prevention; the principal medicines used in treating sick animals, and how to give them.

Lectures are illustrated by use of animals, an Azoux model of a horse which is dissectible, showing nearly 1,000 anatomical structures, skeletons charts, and diseased specimens. Whenever practicable, operations are performed before the class, and students are requested to assist.

Special Hygiene.

To young women of the third year, a course of daily lectures is given upon the laws of life and health. The course extends over a period of 10 weeks, and covers questions pertaining to personal health and the health of the household, such as food, air, exercise, clothing, temperature of rooms, and care of sick room.

Household Economy.

A series of lectures to young women of the second year continues through a term of 12 weeks. These cover the subjects of marketing, the chemistry of cooking, order, neatness and beauty in housekeeping, and comfort of a family.

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KITCHEN LABORATORY.

The class spends one hour each day in the kitchen laboratory, and cooking is done by each student.

Physics and Meteorology.

Two-terms work gives an opportunity for experimental study of the laws of sound, heat, light, electricity, and magnetism; the constitution of the atmosphere; the measurement of temperature and humidity; atmospheric pressure. Text-book, Atkinson's Ganot's Physics. This course also includes a careful study of instruments and methods employed in taking meteorological observations.

Bookkeeping and Commercial Law.

Beginning with a simple cash account, bookkeeping is developed through all the principles of single and double entry. Considerable time is given to those forms best adapted to farm and business life. Each student provides a full set of blanks, and keeps a regular set of books, in which accuracy of calculation and posting and neatness of execution are just as essential as correct understanding of the principles. Text-book, Mayhew's Standard Bookkeeping. In connection with the term's work in bookkeeping, a practical course in commercial law is given, including contracts, farm rights, negotiable paper, sales, real estate, partnership, bailment, common carriers, and business forms.

Algebra.

One year is given to the study of algebra. In the first term, arithmetical processes are briefly reviewed and generalized by the use of negative numbers. The student is made familiar with algebraic notation, the primary processes, factoring, fractions, and the simple equation. In the second term, the equation in its various forms and applications, and the theory of exponents, are made subjects for study. The third term is given to ratio, proportion, series, logarithms, and such other topics as are essential to success in every course in mathematics. Text-book, Wentworth's Higher Algebra.

Geometry.

In geometrical drawing of the first year, the student has already become familiar with geometrical forms, and the construction of figures representing them. Plane geometry is studied during the fall term of the second year. Half the winter term is then given to solid and spherical geometry. Throughout the course, original demonstrations, and the solution of practical problems involving the theorems demonstrated, are required of the class.

Trigonometry and Surveying.

All the essential principles of plane trigonometry are carefully developed and thoroughly mastered. A short treatment of spherical trigonometry follows. Surveying includes theory, adjustment and use of instruments, platting, determination of areas, dividing land, U. S. Government surveys, triangulation, leveling, topographical surveying, and railroad surveying. Field practice with compass, transit, plane table and Y level is required. A topographical map, the data for which are gathered during the fall term, is drawn by each student during the winter term. Text-book, Wentworth's Trigonometry and Surveying.

Mechanics and Engineering.

A careful consideration of the laws of motion and force, as exhibited in machines and various phenomena of nature, occupies a single term. Another term is given to lectures in elementary, mechanical and civil engineering, and to the study of proper materials for buildings, their construction and durability; forms of roofs and bridges; care and use of machinery; and roads and road making. Drafting is an essential feature of the work. Haswell's Engineer's Handbook is used in connection with lectures in engineering.

Drawing.

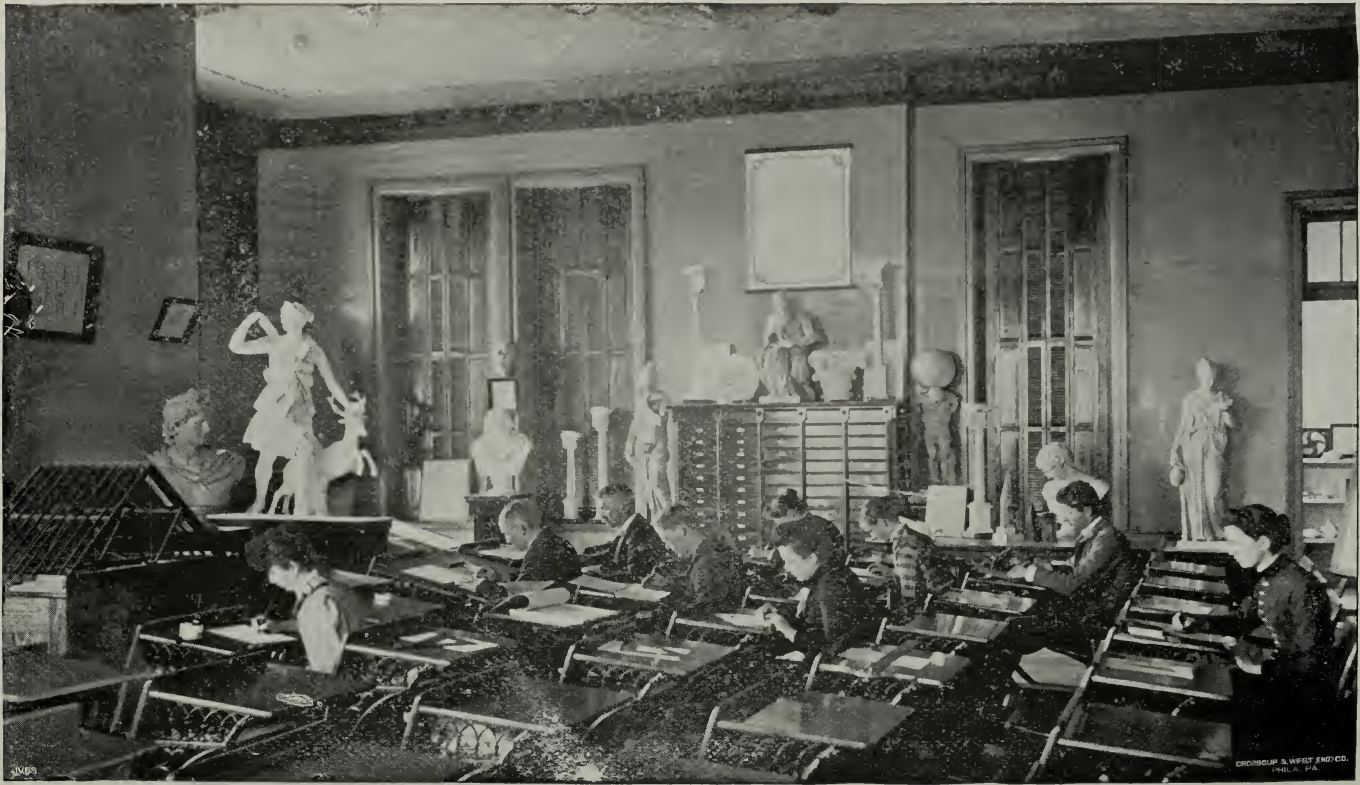
This study is required in four terms, of which two are in the first, one in the second and one in the third year.

First Term.—Definition and mensuration of geometrical magnitudes; construction of perpendiculars, parallels, angles, and polygons, the circle and its secant lines, the ovoid, the oval, the spiral, the ellipse, the parabola, the hyperbola, the involute, the cissoid, the conchoid, the cycloid, the epicycloid, various geometrical ornaments and elementary architectural forms; use of drawing board, T square, and water color; conventional representation of building materials. The College furnishes drawing board, T square, triangles, and water colors, but each student is required to have a first-class drawing pen and a pair of strong compasses, with attachments.

Second Term.—Free hand drawing three hours per week for twelve weeks. This term is given to surface designing. The student begins with simple geometrical forms, involving the straight line and the arc. He is led to note the effects of geometrical arrangement, repetition, alternation, symmetry, proportion, harmony, and contrast. Later on the conventional ornament is taken up, and more subtle curvatures and complex forms are introduced, until, toward the close of the term, natural forms and historic ornaments in the flat are studied. Walters' Free-hand Drawing Books Nos. 1, 2 and 3 are used as text-books.

Third Term.—This term is given to the study of the elements of orthographical and isometrical projection, including the principles of shades and shadows, the development of warped surfaces, helices, etc. Books 3 and 4 of Morse's Mechanical Drawing are used as text-books.

Fourth Term.—Half of this term is given to the study of linear perspective, including angular and oblique perspective, cylindric perspective, perspective correction, intersection of curved and plain surfaces in perspective, shades in perspective, and shaded perspectives. Books 5 and 6 of Morse's Mechanical Drawing are used as text-books. During the other half of the term, the young men study advanced projection. This work includes the interesting intersections of the pyramid, the cylinder, and the cone. The figures are drawn from dictated notes and to given dimensions.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DEPARTMENT OF INDUSTRIAL ART.

Accuracy of measurements is required in all work. Every student is instructed in the manipulations of the blue- and black-printing processes.

The young women do not study advanced projection, but instead of this take up drawing from the object. The models used are geometrical solids, and objects of utility and beauty, whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow, and the reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish. Walters' Object Drawing Books 1 and 2 are used as text-books.

During the winter term of the third year, each student is required to draw, color, ink and letter a map delineating the surveys made during the fall term.

Students who show special aptitude are encouraged to take drawing as a fourth study during any part of the course, and given every opportunity to fit themselves for the drafting office or for special art schools. The instruction includes an extended course in free-hand drawing, shading, coloring, architectural and mechanical drawing, supplemented by a course of reading on art topics.

The graphic work of the different classes and special students is retained by the department for exhibition during Commencement, after which it is returned.

English Language and Literature.

Grammar is passed upon entrance, but the fall term of the first year is given to study of the origin and growth of the language, the analysis of sentence making, and the discussion of idioms, difficult constructions, and parallel expressions, together with such contraction, transposition and transformation of sentences as will aid in securing variety in expression. The course will be essentially one of higher analysis. The winter term is given to the study and practice of composition. The spring term is given to English structure. Under this is included a careful study of words and their elements — roots, prefixes, and suffixes. The most fruitful primitives from the Saxon, Latin and Greek are learned, and also the laws governing the formation of derivatives. Lectures are given on the history and changes of words, and daily exercises are intended to teach careful discrimination in their use.

Third Year.— One term is given to the study of higher rhetoric, embracing the principles of clear explanation and convincing argument, as well as the outlines of sound criticism. This is followed by a term spent in the history of the English language and literature, with abundant illustrations from the best authors.

Students are led this way to appreciate the power of our mother tongue, and at the same time to gain some acquaintance with the best thought of the world. Students are encouraged and directed in the use of the College library, and are under constant oversight in the expression of their thoughts in writing. Each class meets once a week for instruction and practice in elocution and composition. Original declamations, delivered before the students and Faculty, make a part of the drill in the higher classes.

In the course for young women, the first term of the fourth year gives training in the elements of criticism and good taste, by a study of famous works in English and American literature.

Text-Books.—Swinton's Word Analysis, Welch's Composition, Genung's Rhetoric, Kellogg's English Literature.

History and Political Science.

General history is studied during the fall term of the third year. The text-book, Sheldon's Studies in General History, is supplemented by lectures on the progress of civilization and the philosophy of history. Considerable attention is given to the various forms of government. The chief object of the course is to teach the student how to study history, and he is constantly urged, therefore, to form his own conclusions from the facts presented.

The winter term of the third year is given to civil government and the political history of the United States and Kansas. Johnston's American Politics, Canfield's Local Government in Kansas and Hinsdale's American Government are used as text-books, but additional matter is given in lectures and much individual work is required.

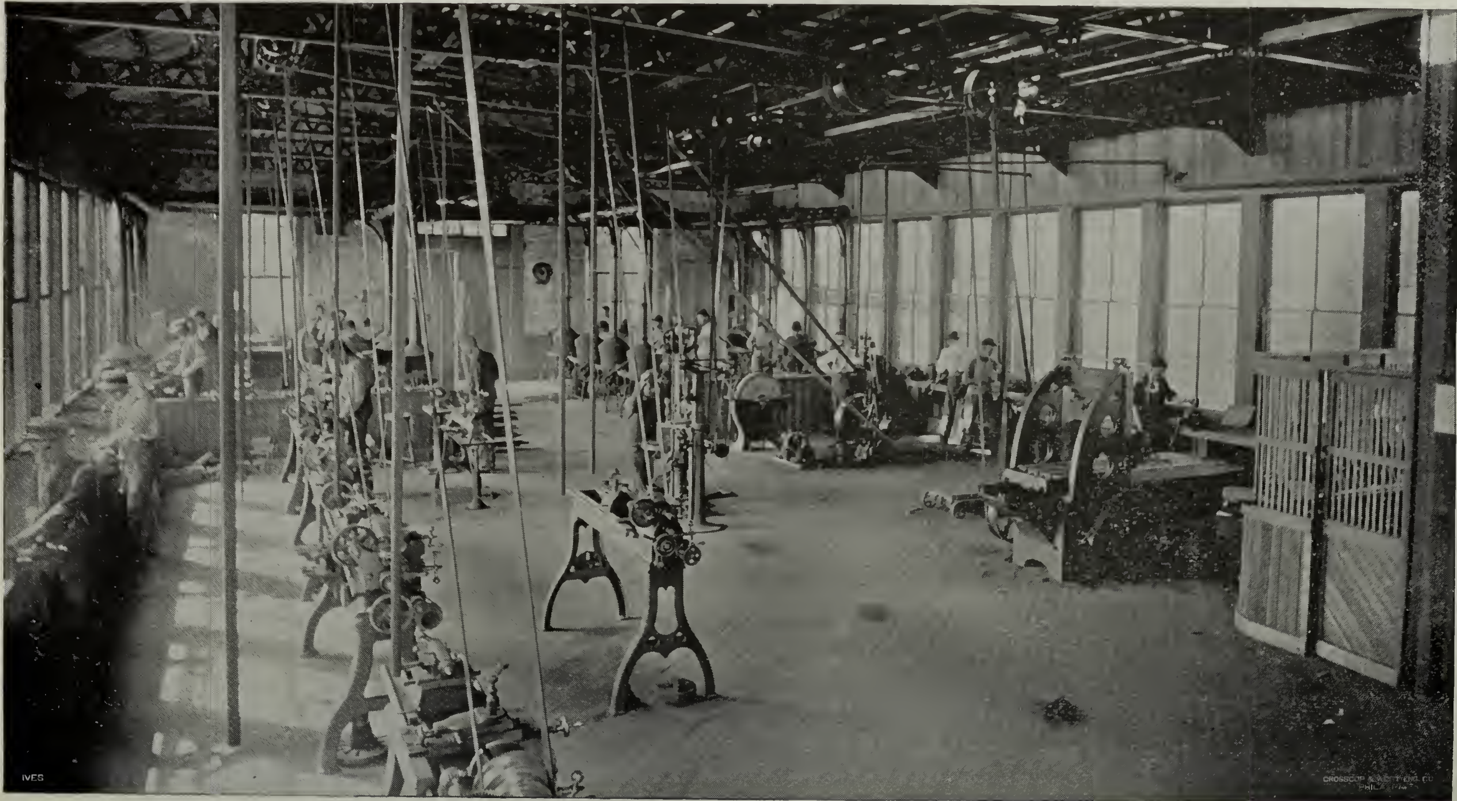
Political Economy.

The study of political economy, in a full term of the fourth year, gives a fair presentation of subjects connected with production, distribution and consumption of wealth. Walker's Briefer Course is the basis of the work, but lectures are given at frequent intervals. Pains is taken to compare conflicting views, and point out sources of information on all sides of vexed questions, without bias or prejudice. Each student is required to present at some time during the term an original paper upon some topic assigned by the instructor

Logic and Philosophy.

The art of reasoning correctly is aided by a study of systematic logic, both deductive and inductive. Special prominence is given to methods for exact observation and experiment and correct principles of classification. The previous researches and experience of the students are made to illustrate these principles. Text-book, Jevons-Hill, Elements of Logic.

A short course in psychology gives the general principles of intellectual and moral philosophy. Perception, understanding, memory, imagination, thought, feeling and volition are topics of explanation and analysis. Theories of right and wrong and correct principles of action are made the means of a clear understanding of the nature of government in various forms, with special attention to individual rights and duties.



MACHINE SHOP.

Industrial Arts.

The training in these departments is designed to be systematic and complete in each, so that the student following a single line diligently through the four-years course gains the essentials of a trade and a reasonable degree of skill. Those who wish only a general acquaintance with the arts can take shorter courses in several of them; but all are to select with a definite purpose, In the established course, young men are required to take the regular term in the carpenter shop, and on the farm and gardens, whatever the industrial chosen; young women are required to give one term to sewing, one to practice in the kitchen laboratory, and one in the dairy.

Agriculture and Horticulture are required of young men as industrials during one term of the second year and one term of the third year. In these practice is made to illustrate and emphasize the teaching, and cover essentially the same ground.

Woodwork and Ironwork.—Woodwork is required of all young men during one term of the first year. In the first term's work a definite, graded series of tasks is given in joining, work to dimensions, and simple problems in construction and turning, with the proper use and care of common bench tools, through which each student is advanced according to ability. Practice is given later in general woodwork, carpentry, cabinetmaking, turning, and pattern making; and the advanced students may have work suited to their chosen line, with special problems of construction, and special training in the use and care of fine tools, including saw filing. All work during industrial hours is laid out by the Superintendent, and belongs to the shop, except that fourth-year students are allowed to work from drawings of their own upon articles for their own use or profit. All students may be allowed the use of the shop outside of the practice hours for work of their own, under direction of the Superintendent.

A general course in ironwork includes graded work in blacksmithing, the management of the forge and hammer, drawing out, welding, forming, etc.; graded work in founding, covering, bench and floor molding in iron and brass; also graded work in machine-shop practice, including bench and machine tool work, filing, chipping, laying out work, boring, turning and planing the metals.

Cooking:—During the winter term, the young women who have lectures on household economy are required to cook one hour each day. They are taught various methods of making the substantial articles of food, as well as allowed to spend some time on the dainty dishes. During the term, they have practice in waiting on the table and in serving guests, thus putting the lectures into immediate practice.

During the fall term, any students who have passed the study of household economy may take cooking as an industrial, in which canning fruits, making preserves, jellies, pickles, mince-meat, desserts, cake and fancy breads form the principal part of the work.

Dairying.— During the spring term, daily instruction and practice in domestic dairying are given the young women of the second year by the instructor in household economy. Here the regular daily work is supplemented by a short course of lectures, intended to explain the best practice in the arts of butter and cheese making, and to give the reasons therefor. The following topics cover, in the main, the instruction given the class: Influences affecting the quality and quantity of milk; butter making; creameries; "deep" and "shallow" setting systems; packing and preserving butter; the household and factory systems of cheese making.

Sewing.— One term of sewing is required before the completion of the first year of study. During this term the work is carefully laid out by the Superintendent in a series of lessons, graded to the capabilities of each student. To more advanced students all ordinary forms of sewing with needle or machine are taught, and any student may furnish material, and work for her own advantage under direction of the Superintendent. Cutting and fitting by a straight-line system are taught, and the systems are furnished at wholesale rates. Fancy needlework and knitting may be taken at certain stages of the course.

Printing.— Two courses are pursued in this art. In one the student is taught the use of the implements or tools used in typography; composition and imposition; correcting proof; technical terms; presses and their workings; and the general duties of a first-class workman. The other course of lessons embraces instruction in spelling, capitalization, syllabication, punctuation, proof reading, and such other work as will make the student accurate and expert. Wilson's Punctuation is the text-book; but much of the instruction is oral — such as grows out of the everyday experience of the office.

Admirable drill is furnished by the *Industrialist* to all, but especially to those who take the full course. The printing which the departments of the College require gives to the advanced student a fair knowledge of the principles and practice of job work.

Instrumental Music.— Provision is made for giving instruction upon the piano, organ, the more important orchestral and band instruments. A full course upon the organ or piano extends over four years, including harmony and composition; but the students may take lessons for a single term if they choose. The College furnishes the pianos and organs for daily practice, but the instruction is paid for at the usual rate, as given under "Expenses." Music may be the industrial for young women, unless some other is required in the course. Young men may take music in addition to their course, if able to keep up standing in classes.

Opportunity is given for students who are sufficiently advanced to join in the weekly rehearsals of the College orchestra on Wednesday, and the cadet band on Friday.

PRINTING DEPARTMENT.

Vocal Music.

All students are furnished instruction in vocal music free of charge, under the direction of the Faculty. Classes meet on Mondays and Wednesdays for advanced pupils, and for beginners on Tuesdays and Thursdays, at 1:30 P.M. The advanced class shares in the music of public exercises during the Commencement week. This study is taken up at the choice of the student, but regular attendance is required as at other classes until excuse is granted.

Arrangements for special voice culture may be made with the professor in charge, on reasonable terms.

Text-books.— Scansion and Song, Brown's Prismatic Charts, Hatton, Concone, Marchesi, with selections from the opera and oratorio.

Military Training.

The course of instruction is both practical and theoretical. The practical occupies two hours each week; the theoretical an average of one.

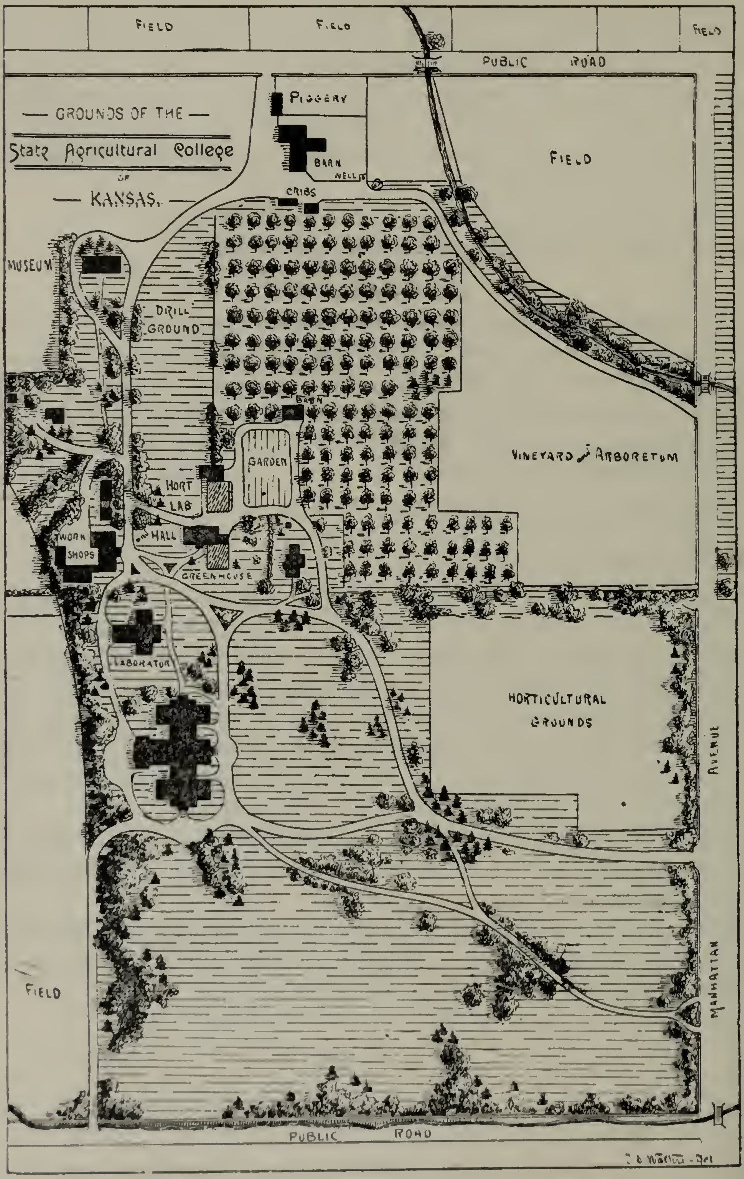
Theoretical.—A course of 32 lectures is given to the second-year class. These are designed to show how an army is organized, equipped, and supplied; to explain some of the minor operations of war; to show the organization of the militia under the militia law of this State. Instruction is afforded to such as desire it in other military subjects.

Practical.—Drills are held twice each week. Students who desire to learn have an opportunity to do so. Having once enrolled, they must serve the remainder of that term. In order to obtain any reasonable degree of proficiency, however, the new recruit should attend drills at least three terms.

The practical course in infantry embraces small-arm target practice, and, as far as possible, all the movements prescribed by the "Drill Regulations of the United States Army" that are applicable to a battalion. Instruction in artillery includes, as far as practicable, such portions of the United States drill regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, and firing blank cartridges.

The College battalion is divided into companies, which are officered by students appointed each term by the professor in charge, with the approval of the President.

Arms and accouterments are furnished by the United States Government, the students being required to keep such as they use in proper condition. Uniforms for use in drill are furnished by the College.


GROUNDS OF THE
State Agricultural College
OF
KANSAS.
FIELD
FIELD
FIELD
PUBLIC ROAD
PIGGERY
BARN
WELL
CRIBS
FIELD
MUSEUM
DRILL GROUND
BARN
GARDEN
HORT LAB
VINEYARD AND ARBORETUM
HALL
WORK SHOPS
GREENHOUSE
LABORATORY
HORTICULTURAL GROUNDS
MANHATTAN AVENUE
FIELD
PUBLIC ROAD
J D Walters - Del

General Equipment.

GROUNDS AND BUILDINGS.

The College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing towards the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted, according to the design of a professional landscape gardener, while well-graveled drives and good walks lead to the various buildings. All of these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and all are heated by steam or hot water. A complete system of sewerage has been provided. The buildings stand as indicated in the plat accompanying the following description:

College, 152x250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices, reception room, cloak rooms, studies, chapel, library, reading room, kitchen laboratory and dairy, sewing room, society rooms, and 12 class rooms.

Chemical Laboratory, one story, 26x90 and 46x75 feet of floor space, in form of a cross. It contains eight rooms, occupied by the Department of Chemistry and Mineralogy.

Mechanics' Hall, 39x103 feet, two stories, and 40x80 feet, one story, occupied by wood and iron shops, printing office, music rooms, iron foundry, lumber rooms, etc., in addition.

Horticultural Hall, 32x80 feet, one story and cellar, having cabinet room, class room, and storage with greenhouse attached.

Horticultural and entomological laboratory, with propagating houses attached.

Museum Building, 46x96 feet, and two stories high. This building, which has served many purposes, is now fitted for an armory, drill room and veterinary laboratory below, and for class room and laboratory for Department of Botany and Museum of Natural History above.

The plans for a building, to cost $60,000, are now in course of preparation by the State architect, designed to provide permanent quarters for the library, with ample reading room; class rooms, laboratories, and cabinet room for zoölogy, entomology, and botany; and suitable rooms for the various College societies. This building is to be completed during the next fiscal year, and will stand near the south end of College Hall.

Appropriation is also made for a central steam plant, to furnish heat and power for all the buildings. This plant is to cost $14,000, and will be completed in the fall of 1893.

The farm barn is a double but connected stone structure, 50x75 feet and 48x96 feet, with an addition of sheds and experimental pens 40x50 feet. A basement, having stables for 75 head of cattle, silos, engine room, and granaries, underlies the entire structure.

The horticultural barn is a stone building, containing storeroom, granary, and stables for several horses.

The foundries, lumber house, implement house, piggery and various outbuildings are of wood.

Two stone dwellings, occupied by the President and the Professor of Agriculture.

LIBRARY.

The College library consists of over 13,000 bound volumes and about 4,000 pamphlets, and is valued at $26,000. It has been selected mainly with a view to supplementing the class-room instruction in the various departments. All the books are indexed in a card catalogue, so that the resources of the library upon any subject may be readily learned. All students have free access to the bookshelves, and may draw the books for home use, under simple and most liberal regulations.

The College subscribes for the leading literary, scientific and agricultural journals; while the principal daily and weekly papers of Kansas and many from other States are received in exchange for the College publications. All these are kept on file for the use of students and Faculty.

The College has been designated as the depository of United States public documents for the Fifth Congressional District of Kansas. About 1,000 volumes have already been received on this account.

The library is open daily except on legal holidays. During the College terms, the library hours are from 8 A. M. to 4 P. M., and during vacation from 9 A. M. to 12 M. The Librarian or the assistant is in constant attendance, at these hours, to assist those who use the books.

An approximate estimate of the number of books, including public reports and bound periodicals, by classes, is as follows:

Classes.	*Vols.*
Agriculture	1,375
Horticulture	550
Mechanics and engineering	450
Mathematics and astronomy	275
Physics and meteorology	350
Chemistry and mineralogy	325
Geology	425
Botany	450
Zoölogy	350
Entomology	150
Physiology and sanitary science	275
General science, proceedings, etc	550
Military science	150
Domestic science	100
Political science	350
Bound magazines	1,300
History	600
Biography	475
Geography and travels	325
Dictionaries and cyclopedias	200
Philology	150
Education	350
Law	100
Administrative reports	550
Public documents on deposit	1,000
Fiction, including juveniles	240
Essays and literary criticism	325
Poetry	125
Logic and philosophy	225
Religion and morals	500
Fine arts	225
Miscellaneous	150

BARN AND SHEDS.

MEANS OF ILLUSTRATION.

Agriculture.— One hundred and eighty-five acres of land used for farm purposes, with hundreds of plats under experiment in grain, grasses, and forage crops; and illustrating various methods of culture and rotation.

A barn 50x75 feet, expressly arranged for experimental uses; and connected with it a general-purpose barn, 48x96 feet, for grain, hay, horses, and cattle. Both buildings are of stone, and are provided with steam power, and equipped with improved machinery for shelling, grinding, thrashing, cutting for the silo, and steaming.

Two piggeries — one of 10 pens, for experimental uses, and one of 6 pens, with separate yards, for general purposes.

An implement house, 22x50 feet, of two stories, and corncribs.

Shorthorn, Aberdeen-Angus, Hereford, Holstein-Friesian and Jersey cattle; Berkshire and Poland-China swine; and Shropshire sheep.

Farm implements of improved patterns.

Collections of grains, grasses, and forage plants.

Buildings, stock and equipments are valued at $26,000.

Horticulture and Entomology.— Orchards containing 100 varieties of apples, 30 of peaches, 30 of pears, 20 of plums, 30 of cherries, and 5 of apricots.

Small-fruit garden, with 200 varieties of small fruits, including blackberries, raspberries, gooseberries, currants, and strawberries; and vineyard, with 160 varieties of grapes.

Forest plantation of 12 acres, containing 20 varieties, of from 1 to 25 years' growth.

Ornamental grounds, set with a variety of evergreens and deciduous trees. Sample rows, containing about 150 varieties of ornamental and useful shrubs and trees, labeled.

Vegetable garden, with hotbeds and cold frames, and experimental beds. Practice rows for students' budding, grafting, cultivating, and pruning.

Two well-planned and furnished greenhouses of three rooms each, stocked with a collection of native and exotic plants.

Museum, containing a collection of woods from American forests, and a large series of specimens in economic and general entomology.

Value of property, exclusive of orchards and grounds, $16,000.

Chemistry and Mineralogy.—Eight rooms, fitted with tables and apparatus for a class of 80 students in qualitative analysis, eight in quantitative analysis, including necessary facilities for assaying, with a mineralogical collection and general illustrative apparatus. Value, exclusive of building, $8,200.

Geology, Zoölogy, and Veterinary Science.—A general museum, well fitted with cases containing valuable collections of mounted Kansas mammals and birds, with mounted skeletons of wild and domestic animals. The largest collection of Kansas fishes and mollusks in the State. Kansas reptiles and batrachians, salt-water fishes and invertebrates, in alcohol. Collections of moundbuilders' and Indian relics. Kansas fossils and rocks, typical of the geological ages found in the State.

In veterinary science: A laboratory fitted with apparatus and reagents, for the study of disease. A collection of charts, models, and anatomical preparations, illustrating healthy and diseased structure. Value, including general museum, $7,500.

Botany.—A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the State; also 28 compound microscopes, four dissecting microscopes, tools, reagents, etc. Valued at $3,750.

Drawing.—Models, plaster casts, patterns, charts, easels, and implements. The class room is provided with top light, and furnished with 24 new Dietzgen patent drawing tables. An adjacent room is fitted up with running water, coating table, ruby light, etc., for blue and black printing. Valued at $2,000.

Physics.—Complete physical apparatus, for general instruction in physics, and meteorological instruments, including a self-recording anemometer. Among the apparatus for special work may be mentioned, Coulomb's torsion balance, Kohlrausch differential galvanometer with reading telescope, Deprez-Carpentier ammeter, Ayrton and Perry's voltmeter, Thompson's potential and current galvanometers, Carhart-Clark standard cell, standard legal ohm, Wheatstone's meter bridge, Edelmann dynamo. The value of the whole is $4,000.

Mathematics and Surveying.—Transits, plane table, compasses, levels, chains, models, etc. Valued at $1,300.

Mechanics and Engineering.—Carpenter shop, with separate benches and tools for 45 students in each class, besides lathes, mortising machine, circular saws, band saws, planer, friezer, boring machine, grinder, and general chest of tools for fine work. Power furnished by a 10-horse-power Atlas engine.

Shops for iron work contain blacksmith forges to accommodate at least 16; brass foundry of 12 benches and large furnace for brass; iron foundry, with two-ton cupola; machine shop equipped for 30 students, including, besides hand tools, lathes, drills, planer, etc.

Inventory of material and apparatus in both shops, $14,000.

Kitchen Laboratory, with ranges, cooking utensils, dining-room furnishings, dairy furniture. Valued at $800.

Printing Office, with 30 pairs of cases; large fonts of 6-point, 8-point, 10-point and 11-point Roman type; a good assortment of job type and brass rule; a Babcock cylinder press, with steam power, a new Liberty quarto-medium job press, a Gordon eighth-medium job press; a mitering machine, a rule-curving machine, and a paper cutter. Value of equipment, $4,300.

Sewing Rooms, with eight machines, models, patterns, and cases; worth $700.

SEWING DEPARTMENT.

Music Rooms, with five pianos, four organs, other instruments, and nine charts; valued at $1,800.

Armory, containing 150 stands of arms (breech-loading cadet rifles, caliber .45), with accouterments; two three-inch rifled guns; also swords, uniforms, etc. Value, exclusive of arms, $1,000.

General Information.

EXAMINATIONS.

Examinations for admission are held at the beginning of each term, as laid down in the calendar of the College year. Applicants, to enter at any time during the term, shall have special examinations. These examinations are chiefly written, and a standard of 70 per cent. is required to pass any study.

Examinations in the course are held as arranged by the Faculty. The results of these examinations are marked on a scale of 100, and combined with the average of the preceding daily exercise upon the same scale into a grade for report to the Secretary. But any student not present at three-fourths, at least, of the class exercises, receives, at such time as the teacher may name, a more extensive examination than the general one; and this examination alone decides the grade. Unexcused absences are taken into account in calculating grades.

Averages of grades in the register are made by giving the final term grade a value of two-thirds and previous grades a value of one-third. After each term examination during the first year of attendance, a report of advancement is made to parents; and any student, upon leaving College at the close of a term, may receive a certificate of standing.

The final grade and the term average must be at least 70 for passing any study; and any student who fails to pass in two studies of the course may drop back a year or withdraw from College.

After completing the studies of the first year, students are allowed special examinations only upon recommendation of the professor in charge, and by permission of the Faculty. Permission for examination in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive.

Candidates for graduation must make good all deficiencies before entering upon the work of the spring term of the fourth year.

Students are not catalogued in the third-year class unless deficiencies of previous years are provided for.

Students deficient in entrance studies must make good such deficiencies before entering upon the work of the second year.

TERMS OF ADMISSION.

Applicants for admission at the beginning of the College year must be at least 14 years of age, and able to pass a satisfactory examination in reading,

VETERINARY LABORATORY AND DRILL

spelling, writing, arithmetic, geography, English grammar, and United States history. Those applying later in the year must show sufficient advancement to enter the classes already in progress. Every effort should be made to begin with the first day of a term, in order to advance with the classes from the first.

The following diplomas and certificates will be received in lieu of entrance examinations:

1st. Diplomas received on the completion of a county course of study which has been approved by the Faculty, when properly signed by the county superintendent.

2d. Certificates of passing the grammar grade in any city school with a course of study approved the Faculty, when properly signed by the city superintendent.

3d. Kansas teachers' certificates issued by the county board of examiners, showing that the above-named studies have been passed with a grade of at least 70 per cent.

The Faculty have approved the courses of study adopted by the following counties and cities; others may be submitted for approval at any time:

COUNTIES.

Allen,
Anderson,
Barber,
Brown,
Bourbon,
Butler,
Chase,
Cherokee,
Clay,
Cloud,
Cowley,
Dickinson,
Doniphan,
Douglas,
Elk,
Ellis,
Ford,
Geary,
Greenwood,
Harper,
Harvey,
Jackson,
Jefferson,
Jewell,
Johnson,
Kingman,
Labette,
Leavenworth,
Linn,
Marshall,
Marion,
McPherson,
Miami,
Mitchell,
Montgomery,
Nemaha,
Neosho,
Osage,
Osborne,
Ottawa,
Pottawatomie,
Republic,
Reno,
Rice,
Riley,
Rooks,
Rush,
Russell,
Saline,
Shawnee,
Sumner,
Wabaunsee,
Washington,
Wilson,
Woodson,
Wyandotte.

CITIES.

Abilene,
Anthony,
Arkansas City,
Atchison,
Augusta,
Beloit,
Burlington,
Caldwell,
Chanute,
Cherry Vale,
Chetopa,
Clay Centre,
Clifton,
Coffeyville,
Columbus,
Concordia,
El Dorado,
Emporia,
Eureka,
Fort Scott,
Fredonia,
Gaylord,
Girard,
Great Bend,
Hiawatha,
Holton,
Horton,
Hutchinson,
Independence,
Junction City,
Kanapolis,
Kansas City,
Kingman,
Larned,
Lawrence,
Leavenworth,
Lyons,
Manhattan,
Mankato,
McPherson,
Minneapolis,
Newton,
Olathe,
Osage City,
Osborne,
Oswego,
Ottawa,
Paola,
Parsons,
Pomona,
Russell,
Salina,
Seneca,
Solomon City,
Topeka,
Washington,
Wellington,
Winfield,
Wichita.

Applicants over 18 years of age, who, for lack of advantages, are unable to pass the full examination, may be received on special conditions.

Applicants for advanced standing in the course must pass examination in all the previous studies of the class to be entered; but, if they have pursued such studies in other institutions of similar rank, they may receive credit for their standing in those institutions, upon presenting a certificate from the proper officer, showing that their course has been equivalent to that given here.

The questions here presented may serve as samples of the examinations for admission.

Grammar.

1. Define grammar, analysis, parts of speech, parsing.
2. Name and define the elements of the sentence.
3. Classify sentences, and write a sentence of each class.
4. Define infinitives, participles. Give an example of each.
5. What is an adjective clause? An adverb clause? A noun clause? Show by sentences the use of each.
6. Give the subdivisions and the modifications, or properties, of the pronoun.
7. Name and illustrate the constructions in which a noun is in the nominative case. In the objective case.
8. Explain agreement of the verb, and give sentences to illustrate.
9. Analyze or diagram: "When I reflect upon the influence of a mother, of a pure, educated, Christian woman, I no longer doubt."
10. Parse italicised words:

> "*Burned Marmion's swarthy cheek* like fire,
> *And* shook *his* very *frame* for *ire*."

Arithmetic.

1. Find the L. C. M. and G. C. D. of 724 and 896.
2. Find the cost of 8,462 lbs. of hay, at $9.50 a ton.
3. A field containing 18 acres is 80 rods long. Find the cost of fencing it at $1.25 a rod.
4. A merchant sells a wagon for $161, and gains 15 per cent. How much did he gain?
5. If copper is mixed with 20 per cent. of its weight of nickel, what per cent. of the mixture is nickel?
6. Find the interest on $960 from March 5, 1882, to September 25, 1888, at 7 per cent.
7. Which is the better, to buy flour at $8 per barrel on 6 months' credit, or at $7.50 cash, money being worth 6 per cent.
8. Which is the better investment, 5-per-cent. stock at 75, or 6-per-cent. stock at 80?
9. Find the cube root of .75 to three figures.
10. What will be the cost of a 90-day draft for $5,000, if exchange is ¼ per cent. discount, and money worth 6 per cent.

Geography.

1. What is latitude? Longitude? A prime meridian? Explain the cause of winter and summer.

2. Name the grand divisions of the earth, and after each write the name of its principal mountain system and largest river.

3. Name and locate five lakes, five gulfs or bays, five rivers, of North America.

4. Draw map of your native State, showing rivers, railroads, and important cities. What are its chief products?

5. Name, in their order, the States that border on the Atlantic ocean, and give the capital of each.

6. What kind of a government has Mexico? Who are its people? What are its exports.

7. Locate the countries of South America. Give the principal exports of Argentine Republic, Brazil, and the West Indies.

8. Name eight countries of Europe, and give their capitals and forms of government. What causes the great emigration from Europe to America?

9. Bound India, the Chinese Empire, and Japan. Locate Egypt and Madagascar.

10. Trace the course of a vessel around the world, starting from New York and touching at five great ports.

United States History.

1. Give a brief account of the first settlements in Virginia, New York, and Pennsylvania.

2. Name the wars in which colonies were engaged, and state briefly the causes and results of each.

3. (*a*) Describe three battles of the Revolutionary War. (*b*) What aid did France give to the United States during that war?

4. (*a*) Give the chief defects of the articles of confederation. (*b*) Give a history of the making of the constitution.

5. Causes of the War of 1812? Describe Perry's battle on Lake Erie, and Jackson's battle of New Orleans.

6. Causes of the Mexican War? Date and terms of treaty of peace with Mexico.

7. Chief events of Jefferson's, Monroe's and Buchanan's administrations.

8. Name, describe and give consequences of one battle in each year of the Civil War.

9. Give date of five important inventions, and state some of the effects of each.

10. Name five important events since the Civil War, and state why you consider each important.

GENERAL DUTIES AND PRIVILEGES.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character, by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week day except Saturdays, and no student may be absent without excuse. Unexcused absences are taken into account in calculating grades. Students enrolled in any term cannot honorably leave the College before the close of the term, unless excused beforehand by the Faculty. A full and permanent record of attendance and scholarship shows to each student his standing in the College.

Chapel exercises occupy 15 minutes before the meeting of classes each morning, and unnecessary absence from them is noted. On Sunday no services are held in the chapel, but students are urgently advised to attend the different churches of the city.

Every Friday, at 1:30 P. M., the whole body of students gather for a lecture from some member of the Faculty, or for the rhetorical exercises of the third- and fourth-year classes. Once a week all the classes meet, in their class rooms, for exercises in elocution and correct expression.

There are four prosperous literary societies which meet weekly, in rooms set apart for their use. The *Alpha Beta*, open to both sexes, and the *Ionian*, for ladies, meet Friday afternoon. The *Webster* and the *Hamilton* admit to membership gentlemen only, and meet on Saturday evening.

The Scientific Club, composed of members of the Faculty and students, meets in the chemical laboratory on the second and fourth Friday evenings of each month.

Branches of the College Y. M. C. A. and Y. W. C. A. hold weekly meetings at the College, and a union meeting on the first Friday evening of each month.

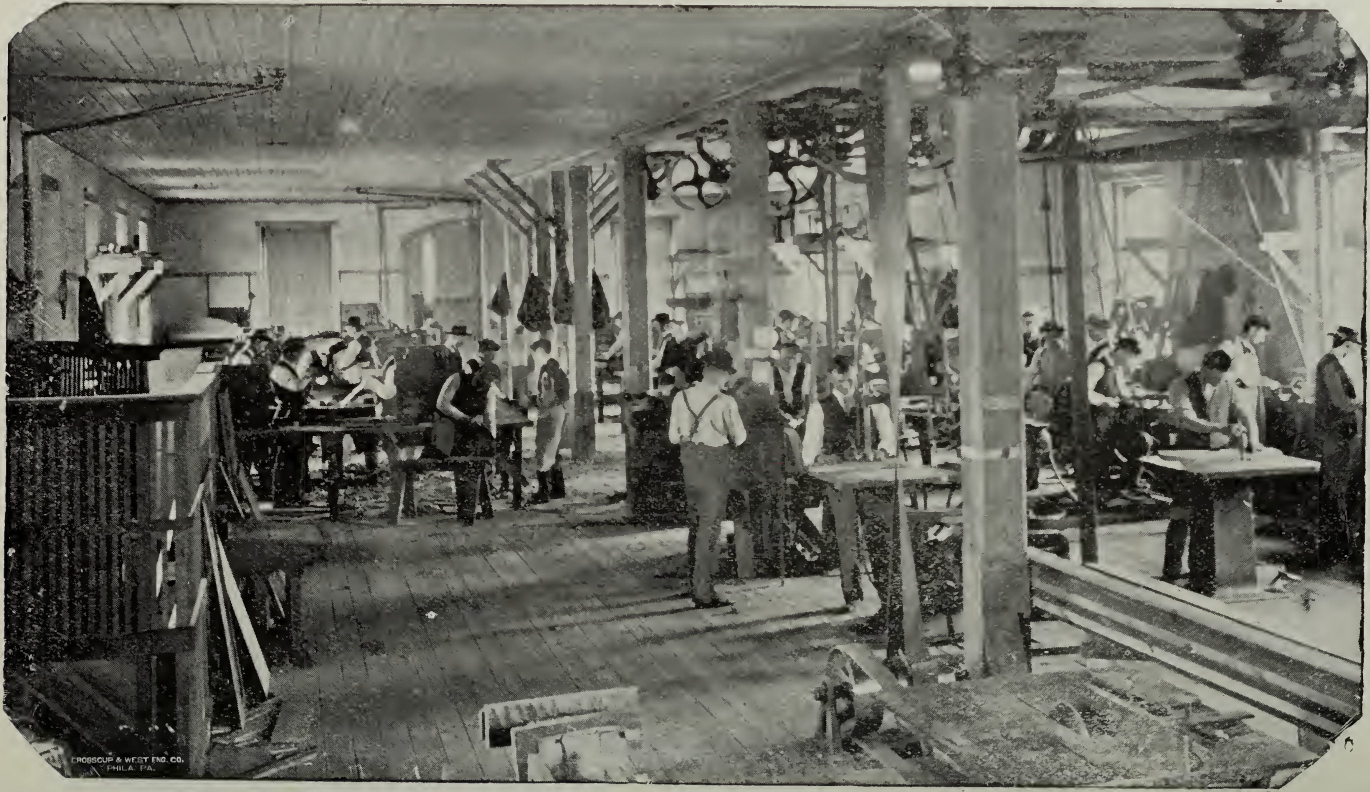
Once in each term the College Hall is opened for a social gathering of Faculty and students, in which music, literary exercises, and friendly greeting find place.

Public lectures by prominent men of the State are provided from time to time, as opportunity offers. All are free.

LABOR AND EARNINGS.

Every encouragement is given to habits of daily manual labor during the College course. Only one hour daily practice in the industrial departments is required; but students are encouraged to make use of other opportunities for adding to their ability and means.

All labor at the College is under the direction of the superintendents of the departments, and offers opportunities for increasing skill and efficiency.



CARPENTER SHOP.

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

In regular weekly statements, the students are required to observe business forms and principles, showing from their daily account when and where the work was performed.

The shops and offices are opened afternoons and Saturdays for the accommodation of skilled students in work for their own advantage. Everywhere the student who works wins respect; and it is a matter of pride to earn one's way as far as possible.

The labor of the students in the industrial departments is principally a part of their education, and is not paid for unless the student is employed upon work for the profit of the College. Students are so employed upon the farm, in the gardens or the shops, and about the buildings. The labor is paid for at rates varying with services rendered, from 8 to 10 cents an hour. The superintendents strive to adjust their work to the necessities of students and give them the preference in all tasks suitable for their employment. So far as practicable, the work of the shops and offices is turned to account for their benefit; and the increasing extent of the grounds and sample gardens brings more of such labor. The monthly pay roll for the past year ranges from $250 to $400.

Many students obtain work in the city or upon neighboring farms, and so pay part of their expenses. In these ways a few students are able to earn their way through College. The amount so earned will vary according to the tact and zeal of the student. The majority must expect to provide by earnings outside of term time, or from other sources, for the larger part of their expenses. The long summer vacation of three months offers opportunity for farm or other remunerative labor; and no one need despair of gaining an education if he has the ability to use his chances well.

EXPENSES.

Tuition is free, and no general fee for incidental or contingent expenses is charged.

Lessons in instrumental music — two a week — are from $10 to $14 a term, according to its length; one a week, $6 to $8.40. In classes of two or more, the cost is less. One-half is to be paid to the instructor in charge with the first lesson; the other half at the middle of the term.

The cost of text-books at the book stores is, for the first year, about $2.75 a term; for the second year, $3 a term; for the third year, $6.50 a term; and for the fourth year, $2.75 a term. Second-hand books may be obtained at lower prices.

The expenses for apparatus and tools to each student during the course are as follows: Drawing, $4.05; microscope for botany and entomology, $1.50; case, pins, etc., for entomology, $2.25; herbarium, $1.50. The total expense for these articles during the four years is less than $10.

Board and washing are not furnished by the College. Board, with furnished rooms, can be procured in private families at from $2.50 to $3.50 per week, or table board in student clubs from $1.50 to $2.25 per week. Some students board themselves at even less cost; and rooms for the purpose can be obtained at a rent of from $1 to $3.50 a month. Washing costs from 50c. to $1 a dozen pieces.

Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 a year.

BUSINESS DIRECTIONS.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid at the office of the Treasurer, in Manhattan.

All payments of principal and interest on account of bonds or land contracts must be made to the State Treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. Geo. T. Fairchild, managing editor. Subscriptions are received by Supt. J. S. C. Thompson.

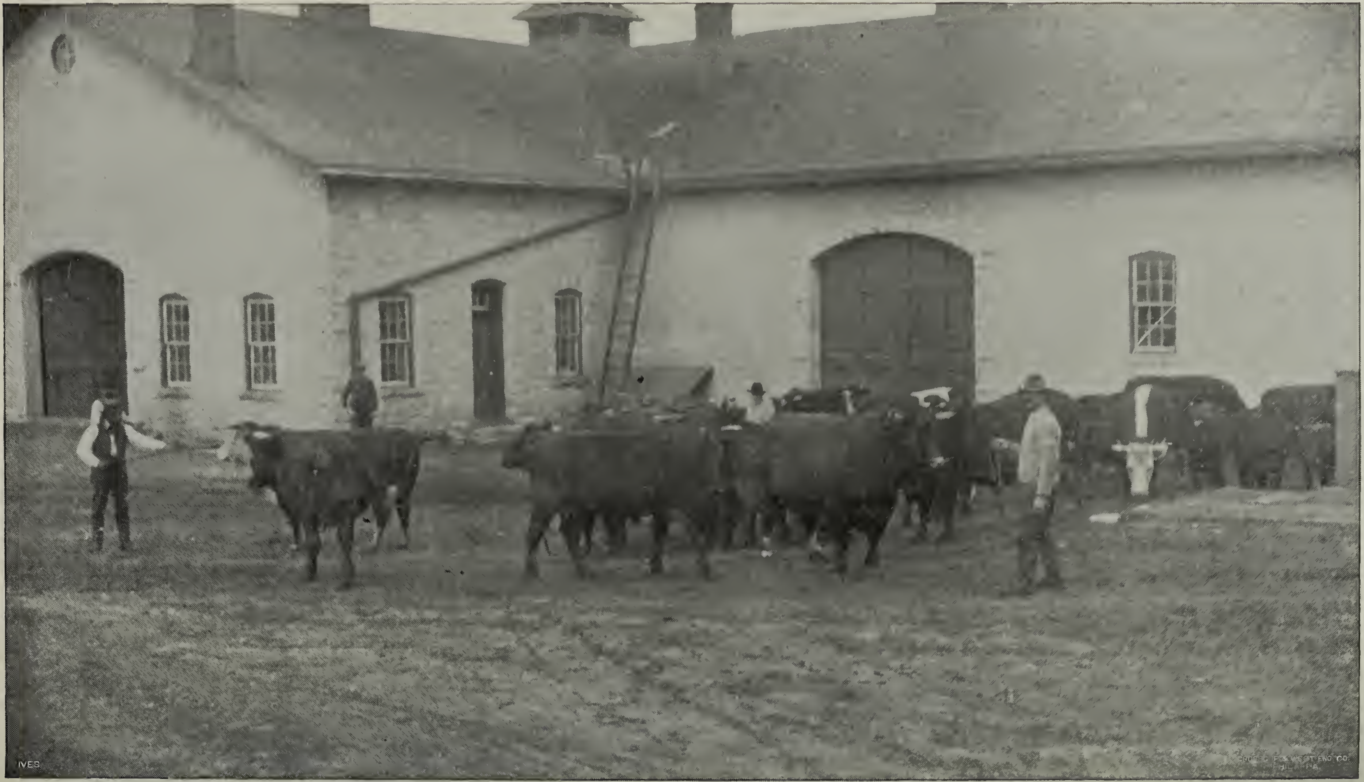
Donations for the library should be sent to the Librarian; donations for the museum, to the chairman of the Committee on Museums.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

General information concerning the College and its work, studies, examinations, grades, boarding places, etc., may be obtained at the office of the President, or by addressing the Secretary.

Applications for farmers' institutes should be addressed, as early in the season as possible, to the President.

The Experiment Station should be addressed through the Secretary of the Council.



A PORTION OF THE COLLEGE HERD.

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

Graduates.

[This list is made from the best data obtainable. A favor will be conferred by notifying the College of any errors or changes.]

1867.

Henry L. Denison, A. M., Denver, Colo. United States court reporter.
Belle M. Haines *Pond*, A. M., Topeka, Kas. Housewife.
Emma L. Haines *Bowen*, A. M., Manhattan, Kas. Housewife.
John J. Points, A. M., Omaha, Neb. Lawyer.
Martha A. White *Abbott*, A. M., Chicago, Ill. Housewife.

1871.

Emily M. Campbell *Robinson*, A. B. Died in 1877.
Ella F. Denison *Whedon*, A. B., Lincoln, Nebraska. Housewife.
Luella M. Houston, A. B., Concordia, Kas. Milliner and dressmaker.
Charles O. Whedon, B. Sc., Lincoln, Neb. Lawyer.
Kate E. White *Turley*, A. B., Chicago, Ill. Housewife.

1872.

Theophania M. Haines *Huntington*, A. B. Died in 1880.
Albert Todd, A. M., Fort Sheridan, Ill. Lieutenant First U. S. Artillery.
S. Wendell Williston, A. M., M. D., Lawrence, Kas. Professor of paleontology and director of the geological survey, State University.

1873.

Eliza Z. Davis *Stringfield*, A. B., Pomona, Cal. Housewife.
Sam Kimble, A. B., Manhattan, Kas. County attorney.

1874.

Harry A. Brous, A. M., M. D., Philadelphia, Pa. Physician.
Edgar F. Clark, A. B., New Whatcom, Wash. Lawyer.
John E. Davis, B. Sc., D. D. S., Oakland, Cal. Dentist.
William D. Gilbert, A. B., Atchison, Kas. Lawyer.
A. Judson White, A. B., Chicago, Ill. Minister.

1875.

Reuben E. Lofinck, B. Sc., Manhattan, Kas. Merchant.
Alice E. Stewart *Points*, A. M., Omaha, Neb. Housewife.

1876.

George A. Gale, A. B., Lake Worth, Fla. Fruit grower.
Ella M. Gale *Kedzie*, A. B., Lansing, Mich. Teacher of art.
Nellie Sawyer *Kedzie*, M. Sc., Manhattan, Kas. Professor of Household Economy and Hygiene in Kansas State Agricultural College.
Carrie M. Kimball, A. B., Garden Grove, Cal. Art instructor.
Minerva E. Whitman *Heiser*, A. B., Lyndon, Kas. Housewife.

1877.

Ella S. Childs, B. Sc., Holdridge, Neb. Teacher.

George H. Failyer, M. Sc., Manhattan, Kas. Professor of Chemistry in Kansas State Agricultural College.

John S. Griffing, M. Sc., Topeka, Kas. Merchant.

Walter C. Howard, B. Sc., Winnebago, Ill. Minister.

Frederick O. Hoyt, B. Sc. Died in 1884.

Louis E. Humphrey, B. Sc., Chapman, Kas. Druggist.

James F. La Tourette, B. Sc., Fort Defiance, Ariz., Indian Agency.

Marion F. Leasure, B. Sc., La Cygne, Kas. Lawyer.

William Ulrich, M. Sc., Manhattan, Kas. Contractor and builder.

1878.

Albert N. Godfrey, M. Sc., Oregon. Farmer and fruit grower.

Charles S. McConnell, B. Sc., Kansas City, Mo. Printer.

Geo. S. Platt, B. Sc. Died in 1878.

Amos E. Wilson, B. Sc., McPherson, Kas. National-bank examiner.

1879.

Arthur T. Blain, B. Sc., Lacanada, Cal. Nurseryman.

Etta Campbell *Blain*, B. Sc., Lacanada, Cal. Housewife.

Wilmer K. Eckman, B. Sc., Longview, Tex. Lumber dealer.

Corvin J. Reed, B. Sc., St. Clere, Kas. Farmer.

Harry C. Rushmore, B. Sc., Ellis, Kas. Train dispatcher.

Wm. H. Sikes, B. Sc., Leonardville, Kas. Merchant and grain dealer.

Lewis A. Salter, B. Sc., Argonia, Kas. Merchant.

Ella Vincent *McCormick*, B. Sc., Clay Center, Kas. Bookkeeper.

Clarence E. Wood, B. Sc., A. B., Denver, Colo. Printer.

1880.

Augustine Beacham, B. Sc., Seattle, Wash. Principal of schools.

Lizzie R. Cox *Kregar*, B. Sc., Milford, Kas. Housewife.

Emma Hoyt *Turner*, B. Sc., St. Paul, Minn. Housewife.

Emma Knostman *Huse*, B. Sc., Arkansas City, Kas. Housewife.

Grace Parker *Perry*, B. Sc., Goodland, Kas. Housewife.

Noble A. Richardson, B. Sc., San Bernardino, Cal. Superintendent of city schools.

Maria E. Sickels *Davis*, B. Sc., Chicago, Ill. Housewife.

1881.

Flora Donaldson *Reed*, B. Sc., St. Clere, Kas. Housewife.

Ulysses G. Houston, B. Sc., Concordia, Kas. Inventor.

Fletcher M. Jeffrey, B. Sc., Escondido, Cal. Lawyer.

William J. Jeffrey, B. Sc., San Diego, Cal. Agent.

Darwin S. Leach, B. Sc., Africa.

William J. Lightfoot, B. Sc., Cripple Creek, Colo. Civil engineer.

Dalinda Mason *Cotey*, B. Sc., Manhattan, Kas. Housewife.

Wirt S. Myers, B. Sc., Tampa, Fla. Furniture manufacturer.

1882.

J. Chester Allen, B. Sc. Died in 1885.

Ida Cranford *Sloan*, B. Sc., Stillwater, Cal. Housewife.

Edward V. Cripps, B. Sc., Boston, Mass. Teacher of elocution.

Warren Knaus, M. Sc., McPherson, Kas. Editor and entomologist.
Mattie E. Mails *Coons*, B. Sc., Manhattan, Kas. Housewife.
Allie S. Peckham *Cordry*, B. Sc., Belleville, Kas. Housewife.
Belle Selby *Curtice*, B. Sc., Kansas City, Mo. Housewife.
Burton L. Short, B. Sc., Kansas City, Kas. City clerk.
John A. Sloan, B. Sc., Stillwater, Cal. Farmer and nurseryman.

1883.

James W. Berry, B. Sc., Jewell City, Kas. Farmer, contractor, and builder.
Mary C. Bower, B. Sc., Manhattan, Kas. Clerk.
Lewis W. Call, B. Sc., LL. M., Washington, D. C. Clerk in Attorney General's office.
Emma E. Glossop, B. Sc., Manhattan, Kas. Teacher.
William J. Griffing, B. Sc., Manhattan, Kas. Farmer and fruit grower.
Phœbe E. Haines, M. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.
Hortense L. Houston *Martin*, B. Sc., Concordia, Kas. Housewife.
Jacob Lund, M. Sc., Manhattan, Kas. Mechanical engineer.
Katie I. Meguire *Sheldon*, B. Sc., Riverside, Cal. Housewife.
J. Dana Needham, B. Sc., Lane, Kas. Merchant.
Milan T. Ward, B. Sc., M. D., Orion, Ill. Physician.
Julius T. Willard, M. Sc., Manhattan, Kas. Assistant Professor of Chemistry, Kansas State Agricultural College.

1884.

Emmett S. Andress, B. Sc., Lakin, Kas. Farmer and stock raiser.
Florence J. Brous, B. Sc., Kansas City, Kas. Teacher.
Bartholomew Buchli, M. Sc., D. V. S., Paxico, Kas. Veterinary surgeon. Teacher.
John H. Calvin, B. Sc., LL. B., Topeka, Kas. Lawyer.
Wm. A. Corey, B. Sc., Salt Lake City, Utah. Teacher and editor.
Henry M. Cottrell, M. Sc., Rhinecliff, N. Y. Superintendent of Ellerslie dairy farm.
Carrie F. Donaldson *Brown*, B. Sc., Portland, Ore. Housewife.
Florence A. Donaldson, B. Sc. Died in August, 1888.
Frank W. Dunn, B. Sc., New Castle, Colo. Farmer and fruit grower.
I. Day Gardiner, B. Sc., Bradford, Kas. Farmer.
Edwin H. Kern, B. Sc., Mankato, Kas. Civil engineer and farmer.
Marion M. Lewis, B. Sc., Ogden, Utah. Minister.
Charles L. Marlatt, M. Sc., Washington, D. C., Assistant in entomological division, U. S. Department of Agriculture.
Lincoln H. Neiswender, B. Sc., Silver Lake, Kas. Farmer.
Geo. C. Peck, B. Sc., Junction City, Kas. Printer.
Hattie L. Peck *Berry*, B. Sc., Jewell City, Kas. Housewife.
John W. Shartel, B. Sc., Guthrie, O. T. Lawyer.

1885.

Thomas Bassler, B. Sc., Geuda Springs, Kas. Teacher and nurseryman.
Albert Deitz, B. Sc., Kansas City, Mo. Merchant.
George E. Hopper, M. Sc., Arkansas City, Kas. In charge of waterworks.
Florence F. Hough, B. Sc., Melrose, Iowa.
Frank A. Hutto, B. Sc., Stillwater, O. T. Lawyer.
Allen Lewis, B. Sc., Topeka, Kas. Civil engineer.
Nellie J. Murphy, B. Sc., Idana, Kas. Teacher.
Arthur L. Noyes, B. Sc., St. Louis, Mo. Electrical engineer.

Clarence D. Pratt, B. Sc., Joplin, Mo. Secretary lead and paint company.

Rollin R. Rees, B. Sc., Minneapolis, Kas. Lawyer.

Frederick J. Rogers, M. Sc., Ithaca, N. Y. Instructor in physics, Cornell University.

Dorothy E. C. Secrest *Hungerford*, B. Sc., Elgin, Tenn. Housewife.

Grace Wonsetler, B. Sc., Verbeck, Kas. Teacher.

Effie E. Woods *Shartel*, B. Sc., Guthrie, O. T. Housewife.

1886.

Lillie B. Bridgeman, M. Sc., Berkeley, Cal. Student and instructor, State University.

Louis P. Brous, B. Sc., Portland, Ore. Draughtsman and topographical engineer.

Paul H. Fairchild, B. Sc., M. D., Brooklyn, N. Y. Publisher of medical journals.

Abbott M. Green, B. Sc., Adin, Cal. Civil engineer and teacher.

James G. Harbord, B. Sc., Fort Leavenworth, Kas. Lieutenant, Fifth Cavalry, U. S. army.

John U. Higinbotham, B. Sc., Chicago, Ill. Cashier, wholesale house.

Maria C. Hopper *Getty*, B. Sc., Downs, Kas. Housewife.

E. Ada Little, B. Sc., Logan, Utah. Instructor in sewing and music, Utah Agricultural College.

Frank L. Parker, B. Sc., Pueblo, Colo. Telegraph operator.

Edward H. Perry, B. Sc., Topeka, Kas. Real-estate agent.

H. Augustus Platt, B. Sc., Coronado, Kas. Farmer.

Ada H. Quinby *Perry*, B. Sc., Topeka, Kas. Housewife.

Ida H. Quinby *Gardiner*, B. Sc., Bradford, Kas. Housewife.

Minnie Reed, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

David G. Robertson, B. Sc., Osborne, Kas. Lawyer.

Edward O. Sisson, B. Sc., Chicago, Ill. Student, Chicago University.

John W. Van Deventer, B. Sc., Sterling, Colo. Editor.

George W. Waters, B. Sc., Westgate, Kas. Teacher.

William E. Whaley, B. Sc., Manhattan, Kas. Lawyer.

F. Henrietta Willard *Calvin*, B. Sc., Topeka, Kas. Housewife.

John L. Wise., B. Sc., Smithboro, Ill. Merchant.

1887.

Edgar A. Allen, B. Sc., Mojave City, Ariz. Teacher in Indian school.

Fred. H. Avery, B. Sc., Wakefield, Kas. Farmer and horse breeder.

Claude M. Breese, M. Sc., Manhattan, Kas. Assistant in chemistry, Kansas State Agricultural College.

John B. Brown, B. Sc., Nashville, Tenn. Assistant in weather bureau.

Walter J. G. Burtis, B. Sc., Fredonia, Kas. Farmer and teacher.

Mark A. Carleton, B. Sc., Manhattan. Assistant in botany, Experiment Station, Kansas State Agricultural College.

Nellie E. Cottrell *Stiles*, B. Sc., Helix, Cal. Housewife.

Bert R. Elliott, B. Sc., Nederland, Colo. At work on a ranch.

Frederick B. Elliott, B. Sc., Manhattan, Kas. Real-estate and insurance agent.

Clara M. Keyes, B. Sc., Banner, Cal. Teacher.

Fred. G. Kimball, B. Sc., Hastings, Neb. Railway postal clerk.

Frederick A. Marlatt, B. Sc., Manhattan, Kas. Assistant in entomology, Experiment Station, Kansas State Agricultural College.

William J. McLaughlin, B. Sc., Bern, Kas. Teacher and editor.

Mary E. Moses, B. Sc., Manhattan, Kas. At home.
Charles A. Murphy, B. Sc., Kingman, Kas. Principal of high school.
Orlando G. Palmer, B. Sc., LL. M., Washington, D. C. Lawyer.
Louis B. Parker, B. Sc. Died in June, 1889.
James E. Payne, B. Sc., Edgerton, Kas. Real-estate and insurance agent.
Seward N. Peck, B. Sc., Topeka, Kas. Cabinetmaker, railroad shops.
George N. Thompson, B. Sc., Belmond, Iowa. Carpenter.
Willis M. Wright, B. Sc., Lake Arthur, La. Farmer.

1888.

Grant Arnold, B. Sc., Toledo, Wash. Teacher.
Bertha H. Bacheller, M. Sc., Lyons, Kas. Teacher.
Clement G. Clarke, B. Sc., New Haven, Conn. Student in Yale University.
Alexander C. Cobb, B. Sc., Wagoner, I. T. Farmer and carpenter.
Mattie Cobb *Clarke*, B. Sc., New Haven, Conn. Housewife.
Minnie H. Cowell, B. Sc., Temperance Hospital, N. W., London, Eng. Hospital nurse.
Lyman H. Dixon, B. Sc., Boise City, Idaho. Draughtsman.
David G. Fairchild, M. Sc., Washington, D. C. Assistant in division of vegetable pathology, U. S. Department of Agriculture.
Carl E. Friend, B. Sc., Soldier, Kas. Banker.
John R. Harrison, B. Sc., Salina, Kas. Railway postal clerk.
Humphrey W. Jones, B. Sc., Alma, Kas. Principal of schools.
Nathan E. Lewis, B. Sc., Grand Rapids, Mich. Draughtsman.
Abbie L. Marlatt, M. Sc., Logan, Utah. Professor of domestic economy, Utah Agricultural College.
William C. Moore, B. Sc., Junction City, Kas. Editor.
Ernest F. Nichols, B. Sc., Hamilton, N. Y. Professor of physics, Colgate University.
Harry E. Robb, B. Sc., Eureka, Kas. Farmer and county surveyor.
Anna Snyder, B. Sc., Oskaloosa, Kas. At home.
Edwin H. Snyder, B. Sc., Highlands, Colo. Editor.
Oliver L. Utter, B. Sc., Baldwin, Kas. Student, Baker University.
Aaron Walters, B. Sc. Died in June, 1892.
Lora L. Walters, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.
Daniel W. Working, jr., B. Sc., Fort Collins, Colo. Secretary State Board of Agriculture.

1889.

Emma A. Allen, B. Sc. Died in June, 1891.
Joseph W. Bayles, B. Sc., Garrison, Kas. Teacher and farmer.
Walter R. Browning, B. Sc., Hamlin, Kas. Farmer.
David E. Bundy, B. Sc., Peach Grove, Kas. Minister.
Samuel S. Cobb, B. Sc., Wagoner, I. T. Druggist and postmaster.
Judson H. Criswell, B. Sc., Manhattan, Kas. Farmer.
Mattie I. Farley *Carr*, B. Sc., Oro, Washington. Housewife.
Clarence E. Freeman, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.
Hattie L. Gale *Sanders*, B. Sc., Lake Worth, Florida. Housewife.
John S. Hazen, B. Sc., Des Moines, Iowa. U. S. Weather Bureau observer.
Albert B. Kimball, B. Sc., Manhattan, Kas. Teacher and farmer.
William Knabb, B. Sc., Hiawatha, Kas. Bank clerk.

Mary C. Lee, B. Sc., Manhattan, Kas. Teacher.

Alonzo A. Mills, B. Sc., Logan, Utah. Assistant in agriculture, Utah Agricultural Experiment Station.

Susan W. Nichols, B. Sc., St. Joseph, Mo. Music teacher.

Walter H. Olin, B. Sc., Osborne, Kas. Superintendent of schools.

Eli M. Paddleford, B. Sc., Baldwin, Kas. Student, Baker University.

Maude F. Sayres, B. Sc., Ottawa, Kas. Bookkeeper.

Florine Secrest, B. Sc., San José, Cal. Teacher.

Stanley Snyder, B. Sc., Oskaloosa, Kas. Farmer.

Charles W. Thompson, B. Sc., Holton, Kas. Dentist.

Jane C. Tunnell, B. Sc., Manhattan, Kas. Assistant principal of high school.

Ina M. Turner *Bruce*, B. Sc., Topeka, Kas. Housewife.

Robert U. Waldraven, B. Sc.. Ruby, Neb. Minister.

Henry S. Willard, B. Sc., M. D., Manhattan, Kas. Physician.

1890.

Samuel I. Borton, B. Sc., Hilltop, Kas. Farmer.

Frank A. Campbell, B. Sc., Highlands, Colo. Reporter.

Arthur F. Cranston, B. Sc., Parsons, Kas. Lawyer.

John Davis, B. Sc., Wakefield, Kas. Principal of schools.

Grant W. Dewey, B. Sc., Manhattan, Kas. Photographer.

Charles J. Dobbs, B. Sc. Topeka, Kas. Lawyer.

Charles W. Earle, B. Sc., Denver, Colo. Advertising agent.

Schuyler C. Harner, B. Sc., Leonardville, Kas. Teacher and farmer.

John W. Ijams, B. Sc., Pine Ridge Agency, S. D. Farmer.

Bertha S. Kimball, B. Sc., Manhattan, Kas. Postgraduate student and microscopic draughtsman, Kansas State Agricultural College.

Harriet E. Knipe, B. Sc., Manhattan, Kas. Teacher.

Nellie P. Little, B. Sc., Manhattan, Kas. Teacher.

Ellsworth Thomas Martin, B. Sc., Georgetown, Colo. Miner and solicitor.

Silas C. Mason, B. Sc., Manhattan, Kas. Assistant Professor of Horticulture, Kansas State Agricultural College.

Wilton L. Morse, B. Sc., Blackfoot, Idaho. Teacher in Indian school.

Albert E. Newman, B. Sc., Watona, O. T. County superintendent.

Julia R. Pearce, B. Sc., Manhattan, Kas. Assistant Librarian, State Agricultural College.

Emil C. Pfuetze, B. Sc., Manhattan, Kas. Superintendent of city water-works.

William H. Sanders, B. Sc., Lake Worth, Fla. Plumber and builder.

Emma Secrest, B. Sc., Mayfield, Cal. Teacher.

Mary B. Senn, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Ralph Snyder, B. Sc., Oskaloosa, Kas. Farmer and teacher.

George E. Stoker, B. Sc., Cambridge, Mass. Student at Harvard University.

Walter T. Swingle, B. Sc., Washington, D. C. Assistant in division of vegetable pathology, U. S. Department of Agriculture.

Gilbert J. Van Zile, B. Sc., Carthage, Ill. Farmer.

Harry N. Whitford, B. Sc., Manhattan, Kas. Teacher.

Thomas E. Wimer, B. Sc. Died in June, 1890.

1891.

William Aaron Anderson, B. Sc., Herington, Kas. Stenographer in railroad office.

William Sherman Arbuthnot, B. Sc., D. V. S., Belleville, Kas. Veterinarian.

Herman William Avery, B. Sc., Wakefield, Kas. Farmer.

Judd Noble Bridgman, B. Sc., Palo Alto, Cal. Student at Leland Stanford University.

Robert James Brock, B. Sc., Manhattan, Kas. Lawyer.

Francis Charles Burtis, B. Sc., Manhattan, Kas. Assistant in agriculture, Experiment Station, Kansas State Agricultural College.

Charles Albert Campbell, B. Sc., Topeka, Kas. Clerk in loan office.

Spencer Norman Chaffee, B. Sc., Lasita, Kas. Teacher and farmer.

Ephraim Clay Coburn, B. Sc., Kansas City, Kas. Clerk in packing house.

Gertrude Coburn, B. Sc., Menomonie, Wis. Instructor in household economy, Stout Manual Training School.

Tina Louise Coburn, B. Sc., Kansas City, Kas. Teacher.

Rachel Callie Conwell, B. Sc., Nelson, I. T. Teacher in Spencer Academy.

Christine Mossman Corlett, B. Sc., Manhattan, Kas. Teacher.

Mary Emmeline Cottrell, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Phil Sheridan Creager, B. Sc., Denver, Colo. Editor agricultural journal.

Kary Cadmus Davis, B. Sc., Austin, Minn. Principal of schools.

Thomas Clarke Davis, B. Sc., Benedict, Kas. Farmer.

Helen Pearl Dow, B. Sc., Randolph, Kas. Clerk in post office.

Anna Fairchild *White*, B. Sc., Manhattan, Kas. Housewife.

Harry Benson Gilstrap, B. Sc., Chandler, O. T. Printer and editor.

Almon Arthur Gist, B. Sc., Victoria, Kas. Railroad agent.

Amy Myrtle Harrington, B. Sc., Junction City, Kas. Teacher.

Delpha May Hoop, B. Sc., Manhattan, Kas. Teacher.

Mayme Amelia Houghton, B. Sc., Randolph, Kas. Teacher.

Willis Wesley Hutto, B. Sc., Stillwater, O. T. Professor of English, Oklahoma Agricultural College.

George Victor Johnson, B. Sc., Centreville, Idaho. Teacher.

Frank Mullett Linscott, B. Sc., D. V. S., Ottawa, Kas. Veterinarian.

Bessie Belle Little, B. Sc., Manhattan, Kas. Assistant in sewing and postgraduate student, Kansas State Agricultural College.

Albert Edward Martin, B. Sc., Denver, Colo. Telegraph operator.

Nellie Evangeline McDonald, B. Sc., Manhattan, Kas. Teacher.

David Collins McDowell, B. Sc., Emporia, Kas. Student at Emporia College.

Alfred Midgley, B. Sc., Minneapolis, Kas. Farmer.

Madeleine Wade Milner, B. Sc., Topeka, Kas. At home.

Paul Chambers Milner, B. Sc., Horton, Kas. Stenographer in railroad office.

Harry Elbridge Moore, B. Sc., Portland, Ore. Bookkeeper.

John Otis Morse, B. Sc., Mound City, Kas. Farmer.

Hattie May Noyes, B. Sc., Wabaunsee, Kas. Teacher.

Louise Reed, B. Sc., Selkirk, Kas. Teacher.

Artemus Jackson Rudy, B. Sc., Fresno, Cal. Fruit raiser.

Henry Vernon Rudy, B. Sc., Fresno, Cal. Fruit raiser.

Lottie Jane Short, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Ben Skinner, B. Sc., Fairview, Kas. Principal of schools.

Caroline Scott Stingley, B. Sc., Manhattan, Kas. Teacher.

Lillian Alice St. John, B. Sc., Manhattan, Kas. Teacher.

Ellis Cheney Thayer, B. Sc., Vera, Kas. Electrical engineer.

Sam L. Van Blarcom, B. Sc., Kansas City, Kas. Railway postal clerk.

Frank Albert Waugh, B. Sc., Stillwater, O. T. Professor of horticulture, Oklahoma Agricultural College.

Fannie Elizabeth Waugh, B. Sc., Marquette, Kas. Teacher.

Flora Emilie Wiest, B. Sc., St. John, Kas. Teacher.

Bertha Winchip, B. Sc., Manhattan, Kansas. At home.

Alfred Orin Wright, B. Sc., Lake Arthur, La. Editor.

Effie Jeannetta Zimmerman, B. Sc., East Norway, Kas. Teacher.

1892.

Grace Maria Clark, B. Sc., Manhattan, Kas. Clerk in executive offices, Kansas State Agricultural College.

George L. Clothier, B. Sc., Alma, Kas. County superintendent.

Lilian Clyde Criner, B. Sc., Spring Valley, Kas. Teacher.

Harry Darnell, B. Sc., McFarland, Kas. Teacher.

William H. Edelblute, B. Sc., Olympia, Wash. Teacher.

Elizabeth Edwards, B. Sc., Manhattan, Kas. Teacher.

John Frost, B. Sc., Blue Rapids, Kas. Teacher.

Effie Gilstrap, B. Sc., Chandler, O. T. Printer and editor.

Ava Hamill *Tillotson*, B. Sc., Salina, Kas. Housewife.

J N Harner, B. Sc., Maple Hill, Kas. Farmer and teacher.

Loyall S. Harner, B. Sc., Lasita, Kas. Farmer.

Charles Pinckney Hartley, B. Sc., Manhattan, Kas. Horticulturist.

John William Abraham Hartley, B. Sc., Manhattan, Kas. Teacher and horticulturist.

James Laird McDowell, B. Sc., Blackfoot, Idaho. Teacher in Indian school.

Robert A. McIlvaine, B. Sc., Los Cerrillos, N. M. Carpenter.

Kate Oldham *Sisson*, B. Sc., Toronto, Can. Housewife.

Daniel Henry Otis, B. Sc., Manhattan, Kas. Assistant in agriculture, Experiment Station, Kansas State Agricultural College.

Ivan Bryan Parker, B. Sc., Kansas City, Mo. Medical student.

Warner S. Pope, B. Sc., Sentinel, Ariz. Land agent.

Benton Homer Pugh, B. Sc., Topeka, Kas. Student at Washburn College.

Elias W. Reed, B. Sc., St. Clere, Kas. Farmer.

Robert Stirling Reed, B. Sc., Clements, Kas. Teacher.

Arthur Daniel Rice, B. Sc., Randolph, Kas. Teacher.

Fred C. Sears, B. Sc., Manhattan, Kas. Foreman in horticulture, Kansas State Agricultural College.

Birdie E. Secrest, B. Sc., Randolph, Kas. At home.

May Secrest, B. Sc., Randolph, Kas. At home.

Ruth Tipton Stokes, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

H. W. Stone, B. Sc., Atchison, Kas. Y. M. C. A. secretary.

Walter Percival Tucker, B. Sc., Douglass, Kas. Editor.

Mary Alice Vail, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Robert Lynn Wallis, B. Sc., Topeka, Kas. Teacher.

Oza Rebecca Wells, B. Sc., Irving, Kas. Teacher.

Daniel F. Wickman, B. Sc., Topeka, Kas. Clerk in railroad office.

George Washington Wildin, B. Sc., Topeka, Kas. Draughtsman, railroad shops.

Charles Ernest Yeoman, B. Sc., Otis, Kas. Teacher.

SUMMARY.

The number of graduates up to 1892 is 320, of whom 105 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of Bachelor of Arts. Since 1877, all have received the degree of Bachelor of Science, after a four-years course in the sciences, with good English training.

Of the 215 men, 6 are deceased, and the remainder are reported in the following occupations:

Farmers	36
Fruit growers and nurserymen	10
Stock raisers	2
Professors and instructors in Agricultural Colleges	7
Assistants in Agricultural Experiment Stations	6
Assistants in U. S. Department of Agriculture	3
Editor of agricultural paper	1
Teachers and students of special sciences	5
Veterinary surgeons	3
Mechanics	7
Civil, electrical and mechanical engineers	10
Contractors and builders	2
Architects and draughtsmen	3
General business men	20
Merchants	8
Printers	4
Telegraph operators	2
Photographer	1
Superintendents of public schools	10
Teachers in public schools	26
Teachers in Indian schools	3
Students in other institutions	8
Officers in army	2
Observers in Weather Service	2
Physicians and students of medicine	4
Druggist	1
Dentists	3
Editors	10
Ministers	5
Secretary Y. M. C. A	1
Lawyers and students of law	17
Officials and official clerks	8
Mail-route agents	3
Total	233
In two occupations	24
	209

Of the 105 women, 4 are deceased, and the remainder are occupied as follows:

Housewifes	38
At home	7
Assistant in sewing department	1
Teachers in household economy	4
Teachers in public schools	29
Teacher in Indian school	1
Teachers and students of special sciences	8

Teacher of music	1
Teachers of art	2
Clerks or stenographers	5
Printer	1
Milliner and dressmaker	1
Assistant librarian	1
Hospital nurse	1
Student in other institutions	1
Editor	1
Total	102
In two occupations	1
	101

OCCUPATIONS OF STUDENTS WHO PURSUED THE COURSE BEYOND THE FIRST YEAR, BUT DID NOT GRADUATE.

[In 1892, requests were sent to all students not then in attendance who have been catalogued since 1877 as "second year students," but who did not complete the course, to report their present occupation, and the one they expect to follow permanently. About 600 were addressed, and 45 per cent. responded. Undoubtedly a large number failed to receive the request, because of changes in residence, of which we had not been informed.]

In the summary which follows, the students are divided according as they nearly or fully completed the first, second or third term's work of the last three years of the course:

MEN.	Farming.		Other industries.		Office work and commerce.		Professions.		Teaching.		Railroading and telegraphy.		*Students elsewhere—pres.*	*Students here—future...*	*Undecided—future.....*	*Total reporting........*
	Present...	*Future...*	*Present...*	*Future...*	*Present...*	*Future...*	*Present...*	*Future...*	*Present...*	*Future...*	*Present...*	*Future...*				
First term of second year....	19	19	7	7	10	9	3	6	5	3	3	2	3	....	4	50
Second term of second year..	18	20	3	2	6	1	3	7	3	1	2	1	1	....	4	36
Third term of second year...	15	16	9	2	10	6	3	8	5	3	3	4	4	1	9	49
First term of third year......	5	4	1	1	3	2	2	3	3	1	1	1	....	1	2	15
Second term of third year...	7	4	1	2	1	1	1	4	2	....	1	1	2	2	1	15
Third term of third year....	5	....	....	....	5	3	1	4	....	1	....	....	1	....	4	12
First term of fourth year....	....	....	1	1	....	....	1	2	....	....	....	....	1	....	....	3
Second term of fourth year..	2	1	1	....	....	1	....	....	1	1	....	....	....	....	1	4
Totals..................	71	64	23	15	35	23	14	34	19	10	10	9	12	4	25	184
Per cent. of total reporting..	39	35	13	8	19	12	8	18	10	5	5	5	7	2	13	....

WOMEN.	Housekeeping.		Other industries.		Office work and commerce.		Professions.		Teaching.		*Students elsewhere—pres.*	*Undecided—future.....*	*Married............*	*No occupation—present..*	*Total reporting........*
	Present...	*Future...*	*Present...*	*Future...*	*Present...*	*Future...*	*Present...*	*Future...*	*Present...*	*Future...*					
First term of second year........	10	9	1	....	2	2	....	1	3	4	2	2	9	....	18
Second term of second year......	4	3	2	2	....	1	1	....	5	6	1	2	4	1	14
Third term of second year.......	7	5	1	2	2	....	1	3	10	11	4	4	6	1	28
First term of third year.....	6	6	1	1	....	. .	....	....	3	1	....	2	6	....	10
Second term of third year........	2	1	....	....	....	....	....	....	....	1	....	....	....	....	2
Third term of third year.........	9	6	. .	....	...	....	1	1	3	5	....	1	6	....	13
First term of fourth year........	2	2	....	....	....	....	....	....	1	1	.. .	....	2	....	3
Second term of fourth year... .	1	....	....	....	....	....	....	....	....	....	...	1	....	....	1
Totals.........................	41	33	5	5	4	3	3	5	25	29	7	12	33	2	87
Per cent. of total reporting	47	38	6	6	5	3	3	6	28	33	8	14	38	2	....

TOTAL ATTENDANCE FOR FIFTEEN YEARS.

Year.	*Attendance.*	*Year.*	*Attendance.*	*Year.*	*Attendance.*
1878–'79	207	1883–'84	395	1888–'89	445
1879–'80	276	1884–'85	401	1889–'90	514
1880–'81	267	1885–'86	428	1890–'91	593
1881–'82	312	1886–'87	481	1891–'92	584
1882–'83	347	1887–'88	472	1892–'93	587

DISTRIBUTION, BY COUNTIES.

COUNTIES.	*1879...*	*1880...*	*1881...*	*1882...*	*1883...*	*1884...*	*1885...*	*1886...*	*1887...*	*1888...*	*1889...*	*1890...*	*1891...*	*1892...*	*1893...*	*Totals.*
Allen	1	1	1	....	....	3	....	1	....	....	....	....	....	....	....	7
Anderson	....	4	3	2	2	....	....	....	....	3	1	4	1	2	1	23
Atchison	4	1	....	3	4	4	3	9	6	9	4	5	3	....	2	57
Barber	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	2
Barton	....	2	....	1	4	1	1	3	1	2	....	....	....	2	....	17
Bourbon	....	....	1	1	....	2	....	1	2	1	....	....	1	1	....	10
Brown	....	1	....	2	6	....	2	14	7	11	6	3	4	1	2	59
Butler	6	7	6	2	1	1	1	2	5	3	5	6	4	1	....	56
Chase	....	3	6	1	2	5	4	3	3	2	3	2	4	3	3	44
Chautauqua	4	1	1	2	3	3	4	....	....	1	4	4	....	1	....	28
Cherokee	18	13	10	3	3	3	1	2	4	2	....	....	....	2	1	62
Clark	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	2
Clay	3	9	10	18	23	26	26	25	22	11	10	10	12	8	15	228
Cloud	....	....	....	1	8	3	6	6	11	2	2	2	4	4	1	47
Coffey	3	....	1	1	3	2	2	3	4	2	4	3	5	4	1	38
Comanche	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Cowley	3	5	6	4	1	9	7	3	2	5	5	7	9	2	7	75
Crawford	2	1	.. ..	....	....	....	2	1	2	3	2	....	1	....	....	14
Decatur	....	....	....	....	1	1	2	2	....	....	....	....	....	....	....	6
Dickinson	3	4	4	3	4	6	5	4	6	4	3	6	4	4	4	64
Doniphan	....	....	2	....	1	1	....	....	2	1	3	2	3	1	3	19
Douglas	....	1	1	4	....	2	3	3	6	3	1	....	3	2	3	32
Elk	....	1	....	1	6	1	4	1	4	4	1	1	3	3	1	31
Ellis	....	....	....	....	....	....	....	....	....	1	3	1	1	....	....	6
Ellsworth	1	....	2	2	1	1	....	2	2	....	....	2	2	....	1	16
Finney	.. ..	....	....	....	....	....	1	....	....	2	....	1	2	3	2	11
Ford	1	....	....	....	1	....	....	....	....	....	....	....	1	1	2	6
Franklin	....	2	1	4	7	6	6	....	4	3	1	....	5	5	3	47
Garfield	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
Geary	6	9	9	6	15	16	6	7	5	14	13	8	13	10	10	147
Gove	....	....	....	....	....	....	....	....	....	....	1	....	2	....	....	3
Graham	....	....	....	....	....	....	....	....	3	2	....	3	4	3	1	16
Grant	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
Greenwood	1	7	3	6	2	....	1	1	3	4	1	1	1	3	4	38
Harper	....	....	....	....	....	....	....	1	....	....	3	3	2	2	4	15
Harvey	1	....	....	....	2	2	1	1	2	1	1	....	1	1	2	15
Jackson	2	3	6	6	2	2	1	3	4	10	5	5	2	10	13	77
Jefferson	4	6	11	14	2	6	4	7	12	9	11	21	9	16	11	143
Jewell	1	2	11	6	10	8	10	7	7	3	....	1	2	2	4	74
Johnson	8	11	....	5	2	8	8	5	2	2	6	11	13	13	10	104
Kingman	....	....	....	....	....	....	1	2	4	1	....	1	1	2	1	13
Kiowa	....	....	....	....	....	....	....	....	....	1	3	....	1	2	2	9
Labette	1	....	....	3	3	....	1	....	2	3	2	2	4	2	....	23
Lane	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
Leavenworth	....	....	2	5	4	1	8	4	5	5	4	4	6	5	3	56
Lincoln	2	....	2	....	1	....	....	1	1	3	....	1	2	3	4	20
Linn	....	1	....	....	....	1	....	8	7	7	5	11	4	2	1	47
Lyon	7	4	5	2	....	3	2	3	4	3	4	1	4	2	4	48
Marion	....	1	1	2	1	....	....	....	1	1	4	2	2	1	6	22
Marshall	2	4	....	3	5	6	7	5	10	9	11	14	9	11	15	111
McPherson	....	1	2	3	2	5	4	2	4	4	5	8	8	9	1	58
Meade	....	....	....	....	....	....	....	....	3	....	....	....	....	1	3	7
Miami	....	1	....	....	....	1	1	3	1	1	3	4	2	1	1	19
Mitchell	2	2	4	3	4	3	4	....	3	1	....	2	10	8	5	51
Montgomery	3	2	....	1	....	2	....	4	2	1	2	1	....	....	....	18
Morris	....	3	....	1	1	8	6	3	4	6	4	9	7	6	11	69
Nemaha	6	5	1	2	1	4	2	5	9	4	5	1	3	9	11	68
Neosho	2	....	....	....	....	....	....	....	1	1	....	1	3	1	1	10
Ness	....	....	....	....	....	....	1	....	1	1	1	....	3	1	....	8
Norton	....	1	....	....	....	....	1	....	....	1	1	1	1	1	....	7
Osage	2	1	....	2	6	6	18	5	6	6	10	9	7	24	16	118
Osborne	1	1	2	1	2	7	5	7	3	11	6	6	5	6	10	73
Ottawa	3	5	6	5	14	12	12	8	14	8	3	1	9	6	8	114
Pawnee	....	....	....	1	....	1	1	....	1	1	....	....	1	1	....	7
Phillips	....	1	....	1	1	2	1	1	2	1	....	5	2	3	4	24
Pottawatomie	6	8	6	7	12	16	15	11	10	23	31	24	25	30	23	257

COUNTIES.	1879...	1880...	1881...	1882...	1883...	1884...	1885...	1886...	1887...	1888...	1889...	1890...	1891...	1892...	1893...	Totals.
Pratt	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1
Rawlins	....	....	....	....	....	....	....	....	....	....	....	2	2	2	....	6
Reno	....	....	....	....	1	4	2	1	....	1	....	....	....	1	2	12
Republic	1	....	....	1	....	2	5	9	12	9	5	6	1	5	3	59
Rice	....	....	2	1	....	3	5	5	4	1	3	4	4	4	5	41
Riley	65	77	77	90	100	112	99	121	140	147	148	175	199	183	198	1931
Rooks	....	....	....	....	....	....	1	1	1	1	....	1	1	1	....	7
Rush	....	1	1	1	....	....	1	....	3	2	1	2	4	4	4	24
Russell	....	....	....	....	....	....	1	1	2	1	....	....	5	8	10	28
Saline	2	4	5	3	1	3	5	1	....	....	....	....	1	2	4	31
Scott	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Sedgwick	1	2	2	....	3	2	2	....	....	....	....	....	....	4	3	19
Shawnee	8	27	13	16	13	11	12	9	12	10	13	21	39	32	25	259
Sheridan	....	....	....	....	....	....	....	1	1	....	1	....	....	....	....	3
Sherman	....	....	....	....	....	....	....	....	....	....	....	....	....	1	3	4
Smith	1	....	1	....	....	....	1	2	2	3	1	1	4	6	....	22
Stafford	....	....	....	1	1	....	1	1	1	2	....	1	....	....	....	8
Stevens	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
Sumner	2	1	1	2	....	6	1	3	3	2	....	5	8	4	1	59
Thomas	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	3
Trego	....	1	2	3	2	3	1	1	....	....	2	....	1	2	1	19
Wabaunsee	6	10	20	16	14	17	13	18	23	15	17	19	24	22	21	255
Wallace	....	1	5	11	2	2	4	....	....	....	....	1	1	1	....	3
Washington	4	....	....	....	....	....	....	....	6	6	11	8	8	6	6	85
Wilson	3	2	1	1	....	3	5	7	4	4	5	5	2	3	2	47
Woodson	....	....	....	....	....	1	2	1	2	....	....	5	5	6	13	35
Wyandotte	....	....	2	1	1	2	....	2	4	10	7	5	7	2	7	50

DISTRIBUTION BY STATES.

STATES.	1879...	1880...	1881...	1882...	1883...	1884...	1885...	1886...	1887...	1888...	1889...	1890...	1891...	1892...	1893...	Totals.
Arizona	....	....	....	....	....	....	1	1	....	....	....	1	1	....	....	4
Arkansas	....	....	....	3	1	....	....	1	....	....	....	1	....	....	....	6
California	....	....	....	....	....	....	1	1	1	1	2	1	1	1	1	10
Colorado	....	....	....	1	1	....	1	2	3	1	....	....	2	3	8	23
England	....	....	....	1	....	4	3	2	....	1	1	1	....	....	....	13
Florida	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
Germany	....	....	....	....	....	....	....	....	....	1	....	....	1	2	1	5
Holland	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
Illinois	3	2	1	4	1	1	7	10	3	7	4	2	....	3	1	49
Idaho	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
Iowa	1	1	....	1	5	3	3	3	3	....	....	5	4	....	1	31
Indiana	....	....	1	1	1	1	1	3	1	....	2	....	....	....	....	11
Indian Territory and Oklahoma	....	....	....	....	....	....	4	4	3	4	4	2	3	2	6	32
KANSAS	198	261	259	288	320	371	363	378	449	437	419	482	555	552	555	5887
Kentucky	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	2
Michigan	....	1	2	1	....	....	....	....	....	1	....	....	....	....	1	5
Missouri	1	5	3	3	4	5	10	10	4	7	6	8	10	7	5	88
Minnesota	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
Montana	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
Massachusetts	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Nebraska	....	....	....	2	1	4	3	3	2	4	1	3	3	7	2	35
New Jersey	....	....	....	....	....	....	....	1	2	2	....	....	....	....	....	5
New Mexico	....	1	....	4	5	2	1	1	2	....	1	2	1	1	1	22
New York	2	1	....	1	2	....	1	....	2	2	2	....	....	1	....	14
North Carolina	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	2
Ohio	....	2	1	1	3	1	1	2	....	....	....	....	1	3	2	17
Pennsylvania	1	....	....	1	1	2	1	2	3	2	....	....	....	....	....	13
South Dakota	....	....	....	....	....	....	....	....	....	....	....	1	2	....	1	4
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	3
Texas	....	....	....	....	....	....	....	....	....	....	....	1	....	1	3	5
Utah	....	....	....	....	....	....	....	1	1	1	1	3	3	....	....	10
Rhode Island	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	2
Wales	....	....	....	....	....	....	....	....	....	1	1	1	1	1	....	5
Washington, D. C.	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
Wisconsin	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
Wyoming	....	....	....	....	....	....	....	1	1	....	....	....	....	....	1	3
Vermont	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1

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KANSAS STATE AGRICULTURAL COLLEGE (General View.)

THIRTY-SECOND ANNUAL CATALOGUE

OF THE

Officers, Students and Graduates

OF THE

KANSAS STATE

Agricultural College.

1894-'95.

MANHATTAN, KANSAS.
1895.

Terms and Vacations.

Fall Term, 1895.

Wednesday, September 11.—Examination for admission, at 9 a. m.
Thursday, September 12.—College year begins.
Friday, October 25.—Examination.
Friday, December 6.—Annual exhibition of the Alpha Beta Society.
Thursday and Friday, December 19, 20.—Examination at close of fall term.
December 21 to January 6.—Winter vacation.

Winter Term, 1896.

Monday, January 6.—Examination for admission, at 9 a. m.
Tuesday, January 7.—Winter term begins.
Saturday, February 1.—Annual exhibition of the Hamilton Society.
February 4 to 15.—Short lecture course for farmers.
Friday, February 14.—Examination.
Saturday, March 14.—Annual exhibition of the Webster Society.
Thursday and Friday, March 26, 27.—Examination at close of winter term.

Spring Term, 1896.

Monday, March 30.—Spring term begins.
Friday, April 24.—Annual exhibition of the Ionian Society.
Friday, May 1.—Examination.
Monday and Tuesday, June 8, 9.—Examination at close of year.
June 7 to 10.—Exercises of Commencement week.
Wednesday, June 10, at 9 a. m.—Commencement.
June 11 to September 9.—Summer vacation.

Fall Term, 1896.

Wednesday, September 9.—Examination for admission, at 9 a. m.
Thursday, September 10.—College year begins.

Board of Regents.

Hon. W. D. STREET (1896)*, *President*,
Oberlin, Decatur county.

Hon. HARRISON KELLEY (1896), *Vice President*,
Burlington, Coffey county.

Hon. C. B. HOFFMAN (1897), *Treasurer*,
Enterprise, Dickinson county.

Hon. C. E. GOODYEAR (1897), *Loan Commissioner*,
Wichita, Sedgwick county.

Hon. C. B. DAUGHTERS (1898),
Lincoln, Lincoln county.

Hon. C. R. NOE (1898),
Leon, Butler county.

Pres. GEO. T. FAIRCHILD (*ex officio*), *Secretary*.

I. D. GRAHAM, *Assistant Secretary*,
Manhattan.

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* Term expires.

Board of Instruction.

FACULTY.

GEORGE T. FAIRCHILD, LL. D. (*Oberlin*), PRESIDENT,
Professor of Logic and Philosophy.

GEORGE H. FAILYER, M. Sc. (*Kansas Agricultural College*),
Professor of Chemistry and Mineralogy.

EDWIN A. POPENOE, A. M. (*Washburn*),
Professor of Entomology and Zoölogy.

DAVID ERNEST LANTZ, M. Sc. (*Pennsylvania State Normal*),
Professor of Mathematics.

JOHN D. WALTERS, M. Sc. (*Kansas Agricultural College*),
Professor of Industrial Art and Designing.

IRA D. GRAHAM, A. M. (*Eureka*),
Secretary, Instructor in Bookkeeping.

OSCAR EUGENE OLIN,
Professor of English Language and Literature.

MRS. NELLIE SAWYER KEDZIE, M. Sc. (*Kansas Agricultural College*),
Professor of Household Economy and Hygiene.

MRS. ELIDA E. WINCHIP,
Superintendent of Sewing.

OZNI P. HOOD, B. Sc. (*Rose Polytechnic*),
Professor of Mechanics and Engineering, Superintendent of Workshops.

ALEXANDER B. BROWN (*Graduate of Boston Music School*), A. M. (*Olivet*),
Professor of Music.

JOHN S. C. THOMPSON,
Superintendent of Printing.

FRANCIS H. WHITE, A. M. (*Princeton*),
Professor of History and Political Science.

CHARLES C. GEORGESON, M. Sc. (*Michigan Agricultural College*),
Professor of Agriculture, Superintendent of Farm.

ERNEST R. NICHOLS,* B. D. (*Iowa State Normal*), B. S., A. M. (*State University of Iowa*),
Professor of Physics.

NELSON S. MAYO, D. V. S. (*Chicago Veterinary College*), M. S. (*Michigan Agricultural College*),
Professor of Physiology and Veterinary Science.

JULIUS T. WILLARD, M. Sc. (*Kansas Agricultural College*),
Assistant Professor of Chemistry.

ALBERT S. HITCHCOCK, M. Sc. (*Iowa Agricultural College*),
Professor of Botany.

SILAS C. MASON, M. Sc. (*Kansas Agricultural College*),
Professor of Horticulture, Superintendent of Orchards and Gardens.

Miss JOSEPHINE C. HARPER,
Instructor in Mathematics.

Miss ALICE RUPP,
Instructor in English.

HOWARD MURRAY JONES, A. B. (*Oberlin*),
Rhetorical Instructor.

HARRY G. CAVENAUGH, Captain 13th U. S. Infantry,
Professor of Military Science and Tactics.

THOMAS ELMER WILL, A. M. (*Harvard*),
Professor of Political Economy.

JULIA R. PEARCE, B. Sc. (*Kansas Agricultural College*),
Librarian.

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*On leave of absence.

ASSISTANTS AND FOREMEN.

CLAUDE M. BREESE, M. Sc. (*Kansas Agricultural College*),
Assistant in Chemistry.

WILLIAM BAXTER,
Foreman of Greenhouses.

WILLIAM L. HOUSE,
Foreman of Carpenter Shop.

ENOS HARROLD,*
Foreman of Iron Shop.

L. A. McKEEN,
Foreman of Farm.

LAURA G. DAY, B. Sc.,
Assistant in Sewing.

RUTH T. STOKES, B. Sc.,
Assistant in Household Economy.

STUDENT ASSISTANTS.

ROBERT J. BARNETT, Horticulture.
LOUIS P. BROUS, B. Sc., Physics, Drawing.
GEORGE L. CLOTHIER, B. Sc., Botany, Writing.
ISABELLE R. FRISBIE, B. Sc., Arithmetic.
LORENA M. HELDER, B. Sc., Music.
PHŒBE E. HAINES, M. Sc., Drawing.
CHRISTIAN A. JOHNSON, Horticulture.
ISAAC JONES, B. Sc., Horticulture.
ROYAL S. KELLOGG, Surveying.
BERTHA S. KIMBALL, B. Sc., Calisthenics.
THEODORE W. MORSE, Horticulture.
OSCAR A. OTTEN, Surveying.
JOHN V. PATTEN, Surveying.
JAMES E. PAYNE, B. Sc., Arithmetic.
ARCHIE C. PECK, Surveying.
JOHN POOLE, Veterinary Department.
FREDERICK E. RADER, Agriculture.
AMBROSE E. RIDENOUR, Agriculture.
FRITZ RUMMEL, Foundry.
FREDERICK J. SMITH, Printing.
WILLIAM. H. STEUART, Surveying.
EDWIN H. WEBSTER, Ironwork.

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* Position held by H. K. Brooks from September 1, 1894, to April 15, 1895.

Other Officers.

GRACE M. CLARK, B. Sc.,
Stenographer in Executive Offices.

LORENA E. CLEMONS, B. Sc.,
Clerk in Executive Offices.

CHARLES A. GUNDAKER,
Engineer.

ANDREW C. McCREARY,
Janitor.

JACOB LUND, M. Sc.,
Fireman and Steam Fitter.

Experiment Station.

Council.

PRESIDENT FAIRCHILD, Chairman, *ex officio.*
PROFESSOR FAILYER, Chemistry.
PROFESSOR POPENOE, Entomology.
PROFESSOR GEORGESON, Agriculture.
PROFESSOR MAYO, Veterinary Science.
PROFESSOR HITCHCOCK, Botany.
PROFESSOR MASON, Horticulture.

I. D. GRAHAM, Secretary.

Assistants.

J. T. WILLARD, M. Sc., Chemistry.
F. A. MARLATT, B. Sc., Entomology.
F. C. BURTIS, M. Sc., Agriculture.
D. H. OTIS, B. Sc., Agriculture.
J. B. S. NORTON, Botany.
F. C. SEARS, B. Sc., Horticulture, Foreman of Gardens.
F. W. DUNN, B. Sc., Irrigation.

Students.

POST-GRADUATES.

CANDIDATES FOR ADVANCED DEGREE, 1895.

RESIDENT.

Louis P. Brous, '86 . . . . *Architecture and Designing, Mathematics, Physics.*
Portland, Ore.

Bertha Sarah Kimball, '90 . . . . *Entomology, Horticulture.*
Manhattan, Riley county.

NONRESIDENT.

James G. Harbord, '86 . . . . *Engineering, Veterinary Science.*
Fort Leavenworth, Leavenworth county.

IN COURSE.

RESIDENT.

Clara Francelia Castle, '94 . . . . *Domestic Economy, Physics.*
Manhattan, Riley county.

Grace Maria Clark, '92 . . . . *Botany, Horticulture, Designing.*
Manhattan, Riley county.

Lorena Estella Clemons, '94 . . . . *Physics, Domestic Economy, Music.*
Manhattan, Riley county.

George L. Clothier, '92 . . . . *Botany, Horticulture.*
Vera, Wabaunsee county.

Laura Greeley Day, '93 . . . . *Domestic Economy, Mathematics.*
Manhattan, Riley county.

Isabella Russell Frisbie, '94 . . . . *Domestic Economy, Mathematics.*
North Topeka, Shawnee county.

Mary Maude Gardiner, '93 . . . . *Domestic Economy, Chemistry.*
Bradford, Wabaunsee county.

Phœbe Ellen Haines, '83, M. Sc. . . . . *Industrial Art, Domestic Economy.*
Manhattan, Riley county.

Lorena Marguerite Helder, '94 . . . . *Domestic Economy, Entomology, Music.*
Manhattan, Riley county.

Isaac Jones, '94 . . . . *Horticulture, Entomology, Botany.*
Ada, Lincoln county.

Stella Victoria Kimball, '94 . . . . *Domestic Economy, Zoölogy, Music, Drawing.*
Manhattan, Riley county.

Nellie Evangeline McDonald, '91 . . . . *Domestic Economy, Music.*
Manhattan, Riley county.

William Henry Moore, '94 . . . . *Horticulture, Botany.*
Manhattan, Riley county.

Nora Newell, '93 . . . . *Domestic Economy, Literature, Politica Economy.*
Manhattan, Riley county.

Daniel Henry Otis, '92 . . . . *Agriculture, Botany.*
Manhattan, Riley county.

James E. Payne, '87........................*Agriculture, Botany.*
Edgerton, Johnson county.

Fred. C. Sears, '92........................*Horticulture, Botany.*
Manhattan, Riley county.

George Wildman Smith, '93...............*Physiology.*
Manhattan, Riley county.

Ruth Tipton Stokes, '92..................*Domestic Economy, Botany.*
Manhattan, Riley county.

Effie Jeannetta Zimmerman, '91..........*Domestic Economy, Chemistry, Music.*
Moray, Doniphan county.

Lora Luvernia Waters, M. Sc., '88........*Botany, Domestic Economy.*
Manhattan, Riley county.

NONRESIDENT.

Lilla Harkins............................*Domestic Economy.*
Brookings, S. D.

Kate Oldham-Sisson, '92.................*Zoölogy, Horticulture.*
Toronto, Can.

Joseph B. Thoburn, '93..................*Horticulture, Botany.*
Peabody, Marion county.

Charles Henry Thompson, '93............*Botany, Horticulture.*
St. Louis, Mo.

Ava Hamill-Tillottson, '92................*Zoölogy, Domestic Economy.*
Hill City, Graham county.

George Washington Wildin, '92..........*Mathematics, Physics, Engineering.*
Raton, N. M.

FOURTH YEAR.

Name.	*Post Office and County.*
Edward Jones Abell,	Scottsville, Mitchell.
Carl D. Adams,	Osawkie, Jefferson.
Robert John Barnett,	Denison, Jackson.
George Gordon Boardman,	Centralia, Nemaha.
Burton Wesley Conrad,	Capioma, Nemaha.
Florence Ruth Corbett,	Manhattan, Riley.
Sid Henry Creager,	Jamestown, Cloud.
Elsie Emeline Crump,	Manhattan, Riley.
David Thomas Davies,	Manhattan, Riley.
Frank Andrew Dawley,	Vincent, Osborne.
Daisy Day,	Manhattan, Riley.
Flora Day,	Manhattan, Riley.
George Adam Dean,	Topeka, Shawnee.
Lillie Christena Dial,	Cleburne, Riley.
Lucy Ellis,	Havensville, Pottawatomie.
Victor Emrick,	Lone Tree, *Missouri.*
George Forsyth,	Howard, Elk.
Ernest Harrison Freeman,	North Topeka, Shawnee.
Florence Eleanor Fryhofer,	Randolph, Riley.
George William Fryhofer,	Randolph, Riley.
Oscar Hugo Halstead,	Leonardville, Riley.
Hortensia Harman,	Valley Falls, Jefferson.
John Bright Harman,	Valley Falls, Jefferson.

Name.	*Post Office and County.*
Clarence V. Holsinger,	Rosedale, Wyandotte.
Christian Andrick Johnson,	Success, Russell.
John James Johnson,	Success, Russell.
Susan Effie Johnson,	Success, Russell.
Fred. Ralph Jolly,	Manhattan, Riley.
William Irvin Joss,	Fairview, Brown.
Maud Estella Kennett,	Silver Lake, Shawnee.
Myron Arthur Limbocker,	Manhattan, Riley.
Samuel Alexander McDowell,	Manhattan, Riley.
Laura Sarah McKeen,	Manhattan, Riley.
Theo. Wattles Morse,	Mound City, Linn.
John Bitting Smith Norton,	Manhattan, Riley.
Oscar Albert Otten,	Brenner, Doniphan.
William Hackworth Painter,	Meade, Meade.
Elva Luthera Palmer,	Clifton, Clay.
Charles Wesley Pape,	Topeka, Shawnee.
Ethel Patten,	Silver Lake, Shawnee.
John Vernon Patten,	Silver Lake, Shawnee.
William H. Phipps,	Chapman, Dickinson.
Alice Julia Quintard,	Silver Lake, Shawnee.
Frederick Ellsworth Rader,	Manhattan, Riley.
Ralph Waldo Rader,	Manhattan, Riley.
Ada Rice,	Manhattan, Riley.
Isaac Archie Robertson,	Manhattan, Riley.
Benjamin Franklin Simeon Royer,	Sterling, Rice.
Charles Baxter Selby,	Enid, *Oklahoma.*
Mabel Gertrude Selby,	Manhattan, Riley.
Ernest P. Smith,	Manhattan, Riley.
Frederick John Smith,	Morganville, Clay.
Kitty Myrtle Smith,	Manhattan, Riley.
Marietta Smith,	Manhattan, Riley.
William Henry Steuart,	Winchester, Jefferson.
Cora Idella Stump,	Manhattan, Riley.
Miriam Esther Swingle,	Manhattan, Riley.
Dora Thompson,	Irving, Marshall.
Elven Creveling Trembly,	Council Grove, Morris.
Edwin H. Webster,	Yates Center, Woodson.
George Carpenter Wheeler,	Burlington, Coffey.
Mary Elizabeth Willard,	Wamego, [Wabaunsee.]
Olive Mabel Wilson,	Austin, *Illinois.*
Ora Gertrude Yenawine,	Manhattan, Riley.

THIRD YEAR.

Cora Atwell,	Manhattan, Riley.
Albert Gustavus Bittman,	Louisville, Pottawatomie.
May Haines Bowen,	Manhattan, Riley.
Edwin Ladue Brockway,	Macomb, *Illinois.*
Con Morrison Buck,	Oskaloosa, Jefferson.
Margaret Isaphene Carleton,	Scottsville, Mitchell.

Name.	*Post Office and County.*
Albert Plummer Carnahan,	Centralia, Nemaha.
William Annesley Cavenaugh,	Manhattan, Riley.
William Arthur Coe,	Coloma, Woodson.
Charlotte Mabel Cotton,	Wabaunsee, Wabaunsee.
Ernest Brown Coulson,	Anthony, Harper.
George Henry Dial,	Cleburne, Riley.
Charles Francis Doane.	Louisville, Pottawatomie.
John Berthold Dorman,	Manhattan, Riley.
Bradford Dougherty,	Kansas City, Wyandotte.
Charles Silan Evans,	Denison, Jackson.
Robert Kilby Farrar,	Axtell, Marshall.
George William Finley,	Manhattan, Riley.
Martha Fox,	Manhattan, Riley.
Philip Fox,	Manhattan, Riley.
Joanna Freeman,	Riley, Riley.
John Jacob Fryhofer,	Randolph, Riley.
Elmer George Gibson,	Willard, Shawnee.
George Clifton Hall,	Hoyt, Jackson.
Alonzo Charles Havens,	Dwight, Morris.
Gertrude Julia Havens,	Dwight, Morris.
Lawrence Wilbur Hayes,	Manhattan, Riley.
John Warren Holland,	Cokeville, *Wyoming.*
Myrtle Hattie Hood,	Manhattan, Riley.
Charles Henry Hoop,	Manhattan, Riley.
Bret Redmon Hull,	Alta Vista, Wabaunsee.
Henry George Johnson,	Assaria, Saline.
Marion Elizabeth Jones,	Manhattan, Riley.
Thomas Lormar Jones,	Manhattan, Riley.
Edward Clarence Joss,	Fairview, Brown.
Royal S. Kellogg,	Fay, Russell.
Mark Kirkpatrick,	Fredonia, Wilson.
Edith Lynnette Lantz,	Manhattan, Riley.
Hilda Margaret Leicester,	Manhattan, Riley.
Sue Long,	Manhattan, Riley.
Charles W. Lyman,	Manhattan, Riley.
Charles Dwin McCauley,	Wilburn, Ford.
Charles Sumner Marty,	Merriam, Johnson.
Frederick Hugo Meyer,	Menager, [Leavenworth.]
Mrs. Elda Lenore Moore,	Manhattan, Riley.
Arthur H. Morgan,	Hillside, Phillips.
Ellen Elizabeth Norton,	Manhattan, Riley.
Hattie A. Paddleford,	Stockdale, Riley.
Mary Kerilla Painter,	Meade, Meade.
Inez Luella Palmer,	Clifton, Clay.
Fannie Parkinson,	Pomona, Franklin.
Archie Carpenter Peck,	Big Valley, *Texas.*
Arthur Lewis Peter,	Oakland, Shawnee.
William Oscar Peterson,	Randolph, Riley.
Charley Edwin Pincomb,	Red Clover, Johnson.
Mary Josephine Pincomb,	Red Clover, Johnson.
John Poole,	Briggs, Geary.

Name.	*Post Office and County.*
Edgar Arthur Powell,	Osage City, Osage.
Lisle Willetts Pursel,	Columbus, Cherokee.
William Joseph Rhoades,	Gardner, Johnson.
Howard Newton Rhodes,	Manhattan, Riley.
Ambrose Elliot Ridenour,	Manhattan, Riley.
Mary Etta Ridenor,	Manhattan, Riley.
Thomas Meade Robertson,	Manhattan, Riley.
Homer Joseph Robison,	Yates Center, Woodson.
Grace Anna Secrest,	Randolph, Riley.
Alice Myrtle Shofe,	Manhattan, Riley.
Gertrude Shofe,	Manhattan, Riley.
Asa Smith,	Osborne, Osborne.
Alfred Caleb Smith,	Manhattan, Riley.
Oliver Russell Smith,	Manhattan, Riley.
Carl Snyder,	Oskaloosa, Jefferson.
Max Gilbert Spalding,	Eureka, Greenwood.
Bertha Anora Steele,	Minneapolis, Ottawa.
Orville Ashford Stingley,	Manhattan, Riley.
Sadie Stingley,	Manhattan, Riley.
Charles Harrison Stokely,	Burlingame, Osage.
Gertrude Ella Stump,	Manhattan, Riley.
Frances Eleanor Thackrey,	Manhattan, Riley.
William Elwood Thackrey,	Manhattan, Riley.
James Dunbar Trumbull,	Manhattan, Riley.
Frank Edwin Uhl,	Gardner, Johnson.
Elsie Lucille Waters,	Weston, Geary.
John Minton Westgate,	Westgate, Geary.
Hannah Amelia Wetzig,	Winkler's Mills, Riley.
John C. Wilkin,	Bow Creek, Rooks.
Mary Elizabeth Wilkin,	Bow Creek, Rooks.
Hattie Ethel Yenawine,	Manhattan, Riley.

SECOND YEAR.

Samuel John Adams,	Marvin, Phillips.
Flora Evalina Allingham,	Manhattan, Riley.
Roy Wilson Ashbrook,	Linwood, Leavenworth.
Asa William Barnard,	Manhattan, Riley.
Roger William Bishoff,	Eudora, Douglas.
William Keller Blachly,	Leonardville, Riley.
Hope Brady,	Manhattan, Riley.
Robert Henry Brown,	Manhattan, Riley.
Nellie Louise Burtner,	Manhattan, Riley.
Mary Frances Carnell,	Bunker Hill, Russell.
Clarence Asa Chandler,	Argentine, Wyandotte.
William Burns Chase,	Hoyt, Jackson.
Caroline Clayton,	Detroit, Dickinson.
Robert Waitman Clothier,	Vera, Wabaunsee.
Minnie Laura Copeland,	Quenemo, Osage.
Maggie A. Correll,	Overbrook, Osage.

Name.	*Post Office and County.*
George Retilley Crawford,	Manhattan, Riley.
Mabel Crump,	Manhattan, Riley.
Anna Magdalena Dahl,	Webber, Jewell.
Inga Josephine Dahl,	Webber, Jewell.
Robert Rodman Denny,	Garden City, Finney.
Fred. Volley Dial,	Cleburne, Riley.
Christopher Dolby,	Longford, Clay.
Samuel Dolby,	Longford, Clay.
Della Drollinger,	Manhattan, Riley.
Edwin Amos Eggleston,	El Reno, *Oklahoma.*
Eugene Emrick,	Lone Tree, *Missouri.*
Anna Phillipina Engel,	Manhattan, Riley.
George Rea Evans,	Tecumseh, Shawnee.
Guy Francis Farley,	Melvern, Osage.
Clyde Farman,	Manhattan, Riley.
Don Scott Farman,	Manhattan, Riley.
Emma Finley,	Manhattan, Riley.
Josephine Finley,	Manhattan, Riley.
Mary Finley,	Manhattan, Riley.
Edward Milton Frowe,	Louisville, Pottawatomie.
Ned Merrill Green,	Manhattan, Riley.
William Logan Hall,	Anthony, Harper.
Walter Eugene Hardy,	Manhattan, Riley.
Elizabeth Lynn Hartley,	Manhattan, Riley.
Matthew Lloyd Heckert,	Deering, Montgomery.
Lewellyn Gaines Hepworth,	Burlingame, Osage.
Ina Emma Holroyd,	Manhattan, Riley.
Edward Leonard Hougham,	Manhattan, Riley.
Winfred Anna Houghton,	Manhattan, Riley.
Guy Dudley Hulett,	Edgerton, Johnson.
Bertha Emma Ingman,	Barnes, Washington.
Clay Berkey Ingman,	Barnes, Washington.
Andrew Jackson,	Lincoln, Lincoln.
Ary Cordelia Johnson,	Success, Russell.
Olive Jane Kearns,	Manhattan, Riley.
Byron Kirkpatrick,	Fredonia, Wilson.
George F. Lechner,	Wilson, Ellsworth.
Robert Milton Lee,	Manhattan, Riley.
Olive Long,	Manhattan, Riley.
Gertrude May Lyman,	Manhattan, Riley.
William Andrew McCullough,	Delavan, Morris.
Frank W. McQuaid,	Mapleton, Bourbon.
Valentine Maelzer,	Neuchatel, Nemaha
Florence Adelia Martin,	Junction City, [Riley.]
George Gilchrist Moore,	Holton, Jackson.
May Moore,	Manhattan, Riley.
Elizabeth Morrison,	Manhattan, Riley.
Stuart Tilson Morse,	Mound City, Linn.
Clara Verena Newell,	Manhattan, Riley.
Sherman Bodwell Newell,	Zeandale, Riley.
Guy Brunaugh Norris,	Garden City, Finney.

Name.	*Post Office and County.*
Jesse Baker Norton,	Manhattan, Riley.
Mary Augusta Norton,	Manhattan, Riley.
Bertha Olivia Olson,	Manhattan, Riley.
Hilda Sophia Olson,	Manhattan, Riley.
Albert Alden Paige,	Manhattan, Riley.
Campbell Kennedy Peck.	Junction City, Geary.
Emilie Matilde Pfuetze,	Manhattan, Riley.
John Arthur Plowman,	Jewell City, Jewell.
Raymond Haines Pond,	Topeka, Shawnee.
William Thomas Pope,	Lincolnville, Marion.
Mary Pritner,	Netawaka, Jackson.
John Purcell,	Manhattan, Riley,
Stanley Robbins,	White City, Morris.
Fritz Rummel,	Hartford, Lyon.
Charles Sandstrom,	Cleburne, [Pottawatomie.]
Otto David Secrest,	Randolph, Riley.
Olive May Shelden,	Manhattan, Riley.
Edward Shellenbaum,	Randolph, Riley.
Charles Wesley Shull,	Manhattan, Riley.
Edwin Lee Smith,	Manhattan, Riley.
Phœbe Jane Smith,	Manhattan, Riley.
Louise Mary Spohr,	Manhattan, Riley.
Wilhelmine Henriette Spohr,	Manhattan, Riley.
Carrie Jane Staver,	Dallas, *Mo.*, [Johnson, Kas.]
Daniel Morgan Steele,	Dallas, *Mo.*, [Johnson, Kas.]
Henry Ashford Stingley,	Manhattan, Riley.
Andrew B. Symns,	Brenner, Doniphan.
Clarence Edgar Tennison,	Norwood, Franklin.
Harriet Emerson Thackrey,	Manhattan, Riley.
John E. Trembly,	Council Grove, Morris.
Raymond S. Vail,	Manhattan, Riley.
Mattie M. Vale,	Alton, Osborne.
Harriet Agnes Vandivert,	Bethany, *Missouri.*
Thomas P. Van Orsdol,	Silver Lake, Shawnee.
Olive Voiles,	Manhattan, Riley.
Ida L. Walters,	Manhattan, Riley.
Flora Etallee Waugh.	Manhattan, Riley.
Mark Wheeler,	Bridgeport, Saline.
Charles Bernard White.	Waverly, Coffey.
Charles Eugene Willey,	Tehama, Cherokee.
Clare Annie Wilson,	Mapleton, Bourbon.
Frederick Zimmerman.	Moray, Doniphan.

FIRST YEAR.

Joshua William Adams,	Marvin, Phillips.
Lillian Angeline Adams,	Richport, Saline.
Delmer Akin,	Manhattan, Riley.
Charles Henry Albert,	Oklahoma City, *Oklahoma.*
John Allingham,	Manhattan, Riley.

Name.	*Post Office and County.*
Willard Mordecai Amos,	Manhattan, Riley.
Joseph Amphlett,	Barnes, Washington.
Frank Larkin Anderson,	Constant, Cowley.
Mabel Edith Anderson,	Sumner, *Nebraska.*
William Anderson,	Cleburne, [Pottawatomie.]
Frank Wagoner Auld,	Frankfort, Marshall.
Elizabeth Edna Asbury,	Topeka, Shawnee.
John Wessley Banning,	Lyndon, Osage.
Edgar Russell Barker,	Kansas City, Wyandotte.
Etta Barnard,	Manhattan, Riley.
Charles Edward Basley,	Jefferson, *Oklahoma.*
Howard Joe Beachum,	Manhattan, Riley.
John Wallace Beil,	Clay Centre, Clay.
Aaron Schuyler Berry,	Manhattan, Riley.
Thomas Bilson,	Eureka, Greenwood.
John Harold Blachly,	Manhattan, Riley.
Albert Edwin Blair,	Quenemo, Osage.
Stella Blaney,	Manhattan, Riley.
Richard Bloomer,	Keithsburg, *Illinois.*
James Courtney Bolton,	Paxico, Wabaunsee.
John Harvey Bower,	Eureka, Greenwood.
Samuel K. Brewer,	Valley Centre, Sedgwick.
Sherman George Britton,	Section, Coffey.
Ruth Brockway,	Manhattan, Riley.
Delta Mae Brown,	Manhattan, Riley.
Earl Edwin Brown,	Powhattan, Brown.
John Frederick Brown,	Marion, Marion.
Don Cameron Buchanan,	Iola, Anderson.
James Allen Buckner,	Topeka, Shawnee.
Earl Butterfield,	Hull, Marshall.
Edmund Samuel Carman,	Phillipsburg, Phillips.
Myra Florence Chandler,	Manhattan, Riley.
Sophronia Del Channell,	Chalk Mound, Wabaunsee.
Roy Erwood Cheney,	Howard, Elk.
Roy Raymond Chipman,	Minneapolis, Ottawa.
Charles Tracy Clark,	Lawrence, Douglas.
Benona Clifton,	Western Park, Elk.
Allie Louisa Cochran,	Pawnee, Bourbon.
Charles Benjamin Cochran,	Olivet, Osage.
Albert Delbert Coe,	Coloma, Woodson.
William Noah Coffey,	Manhattan, Riley.
John Alfred Conover,	Sabetha, Nemaha.
Wilbur George Cooper,	Russell, Russell.
Cecil Edwin Copeland,	Russell, Russell.
Willett Ranson Correll,	Overbrook, Osage.
Ernest Lerned Cottrell,	Wabaunsee, Wabaunsee.
Lucy Maria Cottrell,	Wabaunsee, Wabaunsee.
Elga Elijah Creighton,	Ogden, Riley.
John Francis Crowl,	Chino, *California.*
Jesse Clyde Currie,	Olsburg, Pottawatomie.
Lydia Loretta Currie,	Olsburg, Pottawatomie.

Name.	*Post Office and County.*
Louise Ellen Daniels,	Kickapoo, Leavenworth.
Foster Hamilton Day,	Manhattan, Riley.
Angela Victoria Delos,	Brookville, Saline.
Cassie Belle Dille,	Edgerton, Johnson.
Charles Edward Doty,	Grenola, Elk.
Oliver Harvey Dutcher,	Phillipsburg, Phillips.
Lottie Ethel Eakin,	Manhattan, Riley.
Lydia Belle Ebright,	Wetmore, Brown.
J. H. Enlow,	Pavilion, Wabaunsee.
Hariet Maria Esdon,	Olsburg, Pottawatomie.
Henrietta Evans,	Manhattan, Riley.
Cora Elizabeth Ewalt,	Manhattan, Riley.
Ona Ethel Felts,	Alma, *Nebraska*.
Mabel H. Fielding,	Manhattan, Riley.
Leslie Arthur Fitz,	Vinland, Douglas.
Harvey Foltz,	Hoyt, Jackson.
Myrtle Gertrude Foote,	Marion, Marion.
William Dennison Forsythe,	Fort Riley, Geary.
Zilpha Imogene Fortner,	Manhattan, Riley.
Herbert Alison French,	Silver Lake, Shawnee.
Robert Stuhl Garrett,	Centropolis, [Douglas.]
William Wallace Garvin,	Garrison, Pottawatomie.
Thomas Jefferson Getz,	Hope, Dickinson.
Fred Gibbs,	Industry, Clay.
Marion Gilkerson,	Manhattan, Riley.
Mabel Claire Gillespie,	Manhattan, Riley.
Charles M. Ginter,	Valley Falls, Jefferson.
Charles Stewart Glasgow,	Olivet, Osage.
Albert Jack Goheen,	Manhattan, Riley.
Cora May Goodwin,	Manhattan, Riley.
Harry Amos Goodwin,	Manhattan, Riley.
John Gorbutt,	Franklin, Marshall.
James Armenius Gordon,	Reading, Lyon.
Mary Grace,	Wyoming, Marshall.
Harry Beaumont Graves,	Junction City, Geary.
Annie Frances Hacker,	Manhattan, Riley.
Emma Haid,	Myers Valley, Pottawatomie.
Edwin Manoah Haise,	Russell, Russell.
Annie Viola Hanson,	Manhattan, Riley.
Hakon Hanson,	Guy, Sheridan.
William Hargrave,	St. Mary's, [Wabaunsee.]
Herbert Fiske Hatch,	Manhattan, Riley.
Elmer Hathaway,	Grant, Riley.
Jesse Eddie Henley,	Gridley, Coffey.
James Raymond Henry,	Wilsey, Morris.
Edward Nelson Hilborn,	Manhattan, Riley.
Mollie Bell Hocker,	Beman, Morris.
Emmett Vivian Hoffman,	Enterprise, Dickinson.
Charles Luther Holmes,	Eudora, Douglas.
Lebbeus Meade Holmes,	Eudora, Douglas.
Matthaus Heinrich Horn,	Westerbergen, *Germany*.

Name.	*Post Office and County.*
Charles Jaction Howard,	Osage City, Osage.
Ralph John Wesley Howard,	Manhattan, Riley.
Charles Henry Hubble,	Junction City, Geary.
William Henry Hulburd,	Dafer, Leavenworth.
Charles Clifford Jackson,	Gypsum, Saline.
George Jackson,	Burlingame, Osage.
Elmer Emery James,	Sterling, Rice.
Spencer William James,	Effingham, Atchison.
Carrie Grace Johnson,	Myers Valley, Pottawatomie.
Charles W. Johnson,	Dwight, Morris.
Fred Emanuel Johnson,	Melvern, Osage.
Mary Sebastian Johnson,	Pawnee Station, Bourbon.
Willie Johnson,	Pawnee Station, Bourbon.
Daisy Judd,	Irving, Marshall.
Royal Rockwood Keely,	Augusta, Butler.
Lot Parker Keeler,	Centropolis, Franklin.
Christian Kenney,	Manhattan, Riley.
John Martin Kessler,	Topeka, Shawnee.
John Ben Kimball,	Manhattan, Riley.
Anna Kimble,	Keats, Riley.
Mary Kimble,	Keats, Riley.
Charles Percy King,	Ogamaw, *Arkansas.*
Francis Joseph Klaus,	Bendena, Doniphan.
William Adam Landgraf,	Barnes, Washington.
Edward Langhart,	Wheaton, Pottawatomie.
Charles Henry La Rue,	Phillipsburg, Phillips.
Edward Carlyon Lawry,	Overbrook, Osage.
Patience Layton,	Manhattan, Riley.
Christian Dagobert Lechner,	Morganville, Clay.
James Henry Lee,	Eureka, Greenwood.
Charles Henry Lehmkuhl,	Muscotah, Atchison.
Bernice Locke,	Manhattan, Riley.
Bessie May Locke,	Manhattan, Riley.
George Logan,	Myers Valley, Pottawatomie.
John Alexander Lovette,	Crescent, Kiowa.
Edward Everett Long,	Simpson, Mitchell.
Minnie Eva Lyon,	Riley, Riley.
Paul Lyttle,	Dover, Shawnee.
Charles Irving McCaskey,	Ft. Le'v'nworth, Le'venworth.
Jessie Estelle McClurg,	Manhattan, Riley.
George Garfield McDowell,	Manhattan, Riley.
Anna Glenn McHugh,	Manhattan, Riley.
Inez Isadore Manchester,	Chiles, Miami.
Maude Mannen,	Overbrook, Osage.
Clark Mansfield,	Junction City, Geary.
Fred Markley,	Minneapolis, Ottawa.
Fred Howard Martin,	Junction City, [Riley.]
Henry Alba Martin,	Junction City, [Riley.]
Alice Maude Melton,	Manhattan, Riley.
George Gerkein Menke,	Garden City, Finney.
John Arthur Mercer,	Topeka, Shawnee.

Name.	*Post Office and County.*
Ottelie Anna Meyer,	Menager, [Leavenworth.]
Norman Mills,	Leanna, Neosho.
Howard Ellicott Moore,	Cuba, Republic.
Walter Seldyn Morgan,	Manhattan, [Pottawatomie.]
Edna Morrison,	Hillsdale, Miami.
Charles William Nelson,	Michigan Valley, Osage.
Louis Anthona Nelson,	Marysville, Marshall.
Albert Bulkley Newell,	Manhattan, Riley.
Schuyler Nichols,	Liberal, Seward.
Prather Noble,	Manhattan, Riley.
Fannie Gertrude Noyes,	Wabaunsee, Wabaunsee.
Fred Robert Nuzman,	Circleville, Jackson.
Mary Elizabeth Paddleford,	Stockdale, Riley.
Lucy Junie Parks,	Manhattan, Riley.
Ernest Byron Patten,	Silver Lake, Shawnee.
Elizabeth A. Patton,	Coldwater, Comanche.
Carl Payne,	Cadmus, Linn.
Frank Peabody,	Muscotah, Atchison.
Blanche Pfaff,	Lincoln Centre, Lincoln.
Anna Marie Phillips,	Manhattan, Riley.
Nora Anna Phillips,	Russell Springs, Logan.
George Thomas Pickerell,*	Chalk Mound, Wabaunsee.
William Poole,	Briggs, Geary.
Luther Eugene Potter,	Rose, Woodson.
Andrew Pottorf,	Riley, Riley.
Otto Independence Purdy,	Fairview, Brown.
Anna Elizabeth Putnam,	Athelstane, Clay.
Llewellyn Victor Putnam.	Athelstane, Clay.
Cassius Clayton Rambo,	Elk Falls, Elk.
Sarah Eliza Rathbone,	Manhattan, Riley.
Leah Reyburn,	Leavenworth, Leavenworth.
Gertrude Rhodes,	Manhattan, Riley.
John Boggs Ricards,	Hymer, Chase.
Abba Rice,	Manhattan, Riley.
Banhart Julius Richter,	Oskaloosa, Jefferson.
Magdalena Alvina Richter,	Oskaloosa, Jefferson.
Jennie Florence Ridenour,	Manhattan, Riley.
Lettie Edith Rigney,	Manhattan, Riley.
Birdie Emma Riley,	Willard, Wabaunsee.
Mattie Jane Riley,	Willard, Wabaunsee.
Albert Robison,	Yates Center, Woodson.
Henry Rogler,	Matfield Green, Chase.
Fred Clarence Roll,	Effingham, Atchison.
Mary Ross,	Manhattan, Riley.
Ferdinand John Rumold,	Dillon, Dickinson.
Joshua Rudolph,	Milford, Geary.
Stella Amelia St. John,	Wabaunsee, Wabaunsee.
Alvira Salkeld,	Manhattan, Riley.
Martin Wilbur Sanderson,	Reedville, Marshall.

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* Expelled.

Name.	*Post Office and County.*
William Worth Sanno,	Fort Logan, *Colorado.*
Clarence Patterson Scott,	North Topeka, Shawnee.
Bert Scott,	Olivet, Osage.
Anna Seeland,	Manhattan, Riley.
Willie Sheetz,	Allen, Lyon.
Anna Belle Sheldon,	Berryton, Shawnee.
Fred Raymond Shofe,	Manhattan, Riley.
Emma Almira Shull,	Manhattan, Riley.
Troy E. Smelser,	Lawrence, Douglas.
Harry Elwood Smith,	Russell, Russell.
Mabel Smith,	Pottersburg, Lincoln.
Maurice Russell Smith,	Russell, Russell.
Birchard Franklin Snodgrass,	Little River, Rice.
Harley Lee Snodgrass,	Little River, Rice.
Milton David Snodgrass,	Little River, Rice.
Allen Wilson Staver,	Dallas, *Mo.* [Johnson, Kas.]
John Francis Stephens,	North Topeka, Shawnee.
Elizabeth Lee Stingley,	Manhattan, Riley.
Grace Jessie Stokes,	Garnett, Anderson.
Tacy Vernon Stokes,	Garnett, Anderson.
Samuel Morris Strawn,	Valley Falls, Jefferson.
Mary Sullivan,	Solomon City, Dickinson.
Lizzie Sullivan,	Solomon City, Dickinson.
John L. Swanson,	Madison, Greenwood.
Bessie Eugenie Sweeting,	Junction City, Geary.
Anna Grace Tevis,	Tevis, Shawnee.
Cora Thackrey,	Manhattan, Riley.
Ernest Thoes,	Alma, Wabaunsee.
Henry Marsden Thomas,	Melvern, Osage.
Lee Thompson,	Western Park, Elk.
Owen Elmer Thompson,	Alexander, *Nebraska.*
Emma Elizabeth Tilton,	Detroit, Dickinson.
Frank Davis Tomson,	Manhattan, Riley.
Don Towler,	North Topeka, Shawnee.
Bessie Voiles,	Manhattan, Riley.
Wardell Hardenburgh Tunnison,	Wheaton, Pottawatomie.
Minnie Walmer,	Merriam, Johnson.
Harry Walters,	Manhattan, Riley.
Emma Rebecca Wandler,	Junction City, Geary.
Fred Dorsey Waters,	Weston, Geary.
Frank Weurth,	Leonardville, Riley.
Henry Edward Wetzig,	Winkler's Mills, Riley.
Otto Christian Weyer,	Baileyville, Nemaha.
Frank Wheeler,	Canton, McPherson.
John Melvin Wheeler,	Canton, McPherson.
Abner Davis Whipple,	Olivet, Osage.
Alma Franklin Whitelock,	Manhattan, Riley.
Adelaide Frances Wilder,	Manhattan, Riley.
Josephine Hannah Wilder,	Manhattan, Riley.
Ernest D. Williams,	Manhattan, Riley.
Ivan Whittier Williams,	Grantville, Jefferson.

Name.	*Post Office and County.*
Julia Arminta Williams,	Edgerton, Johnson.
Nannie Elizabeth Williams,	Edgerton, Johnson.
Alexander George Wilson,	Mapleton, Bourbon.
Clara May Wilson,	Eskridge, Wabaunsee.
Henson L. Wilson,*	Eskridge, Wabaunsee.
John Richard Clark Wilson,	Colby, Thomas.
James Charles Wolcott,	Russell, Russell.
Lona Wolfe,	Little River, Rice.
Alice Ethel Wolfley,	Ontario, Jackson.
Ida Phene Wolfley,	Ontario, Jackson.
Perley Wolfley,	Ontario, Jackson.
William Hollingsworth Wood,	Byron, *Nebraska.*
Courtland Voorhees Wyckoff,	Wyckoff, Lyon.
Harvey W. Yenawine,	Manhattan, Riley.
Frank Bruce Yoder,	Morrill, Brown.
Ada Almeda Zimmerman,	Olathe, Johnson.
Kate Elizabeth Zimmerman,	Moray, Doniphan.
David Luther Zirkle,	Richland, Shawnee.

SPECIAL STUDENTS.

Edward Pens Ellis,	Bernal, Reno.
Charles Shepard Green,	Manhattan, Riley.
Ada Ingman,	Barnes, Washington.
Norval Henry Will,	Long Pine, *Nebraska.*
Ortho Olden Wolfe,	Ottawa, Franklin.

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*Expelled.

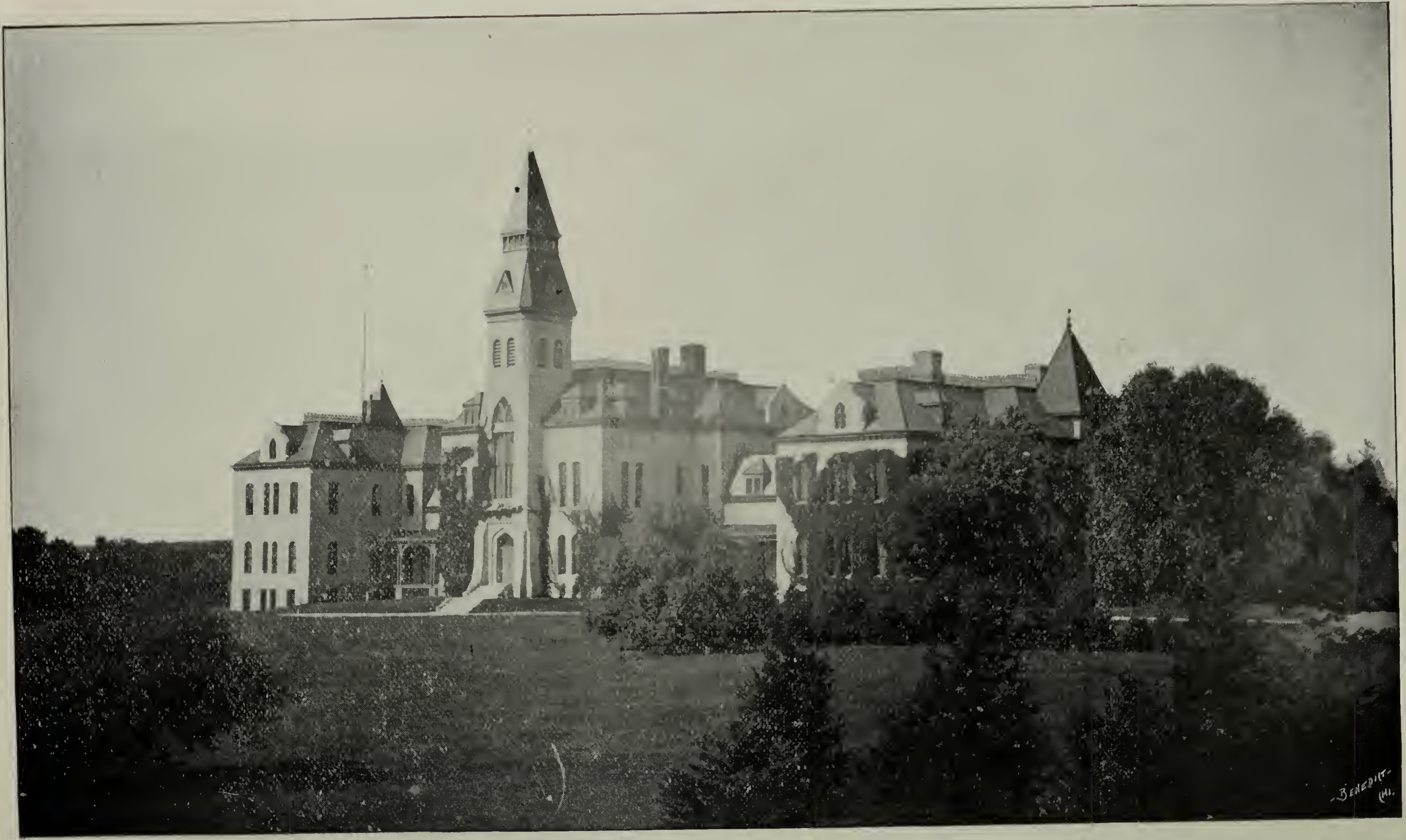
SUMMARY.

	Gentlemen.	*Ladies.*	*Total.*
Postgraduate	13	17	30
Fourth year	40	24	64
Third year	58	31	89
Second year	64	44	108
First year	182	94	276
Special	4	1	5
Totals	361	211	572

From 66 counties of Kansas, 546.

From 14 other states, 26.

Applicants not enrolled, 20.



MAIN COLLEGE HALL.

NEW LIBRARY BUILDING.

RECORD OF ATTENDANCE, 1879-'95.

COLLEGE YEAR.	*Special.*	*First year.*	*Second year.*	*Third year.*	*Fourth year.*	*Post-graduate.*	*Total.*	*Graduated.*
1878–'79	.....	90	89	16	12	....	207	9
1879–'80 †	.....	167	61	35	11	2	276	7
1880–'81 *	.....	184	48	24	9	2	267	8
1881–'82	.....	232	50	19	11	....	312	9
1882–'83	.....	245	60	30	12	....	347	12
1883–'84	.....	257	92	26	18	2	395	17
1884–'85	.....	274	71	36	16	5	402	14
1885–'86	.....	274	91	35	24	4	428	21
1886–'87	.....	312	96	44	24	7	485	21
1887–'88	.....	305	92	46	27	2	472	22
1888–'89 †	.....	266	103	41	28	7	445	25
1889–'90	.....	307	105	63	28	11	514	27
1890–'91 †	.....	343	135	50	53	12	593	52
1891–'92	.....	336	139	62	37	10	584	35
1892–'93	.....	339	110	66	43	29	587	39
1893–'94	.....	275	141	72	42	25	555	40
1894–'95	5	276	108	89	64	30	572	......

*Course strengthened.

†Requirement for admittance raised.

History and Resources.

AN act of Congress, approved July 2, 1862, gave to each state public lands to the amount of 30,000 acres for each of the senators and representatives in Congress according to the census of 1860, for the "endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Under this act, the state of Kansas received 82,313.53 acres of land, and, in 1863, established the State Agricultural College, by endowing with these lands Bluemont College, which had been erected two miles from Manhattan, under the auspices of the M. E. Church, but was presented to the state for the purpose named in the act of Congress.

In 1873, the College was reorganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 219 acres, one mile from the city of Manhattan. On this fine location the state has provided buildings valued at $210,000; of these a description is given elsewhere. The farm and grounds, furniture, stock, and other illustrative apparatus, are valued at $175,000. The present value of buildings, grounds, apparatus, etc., is almost exactly equal to the sum of all appropriations by the state. Nearly all the lands have been sold, giving a fund of $502,352.35, which is by law invested in bonds, the interest alone being used for the current expenses of the College.

The annual income from the endowment fund — about $30,000 — is supplemented by an appropriation under an act of Congress approved August 30, 1890, of $15,000 for 1890, and a sum increasing each year by $1,000 until the annual amount shall be $25,000. This fund, now $21,000, is "to be applied only to instruction in agriculture, the mechanic arts and the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." "No portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings."

All expense of instruction is thus provided for, and the state is left to erect and maintain the necessary buildings and meet expenses in management of the funds.

Under an act of Congress approved March 7, 1887, the college receives, by annual appropriation in Congress, $15,000 a year for the maintenance of an experiment station, "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The property of the station, including a building erected especially for its use, amounts to more than $10,500.

Grounds and Buildings.

THE College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing towards the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted, according to the design of a professional landscape gardener, while well-graveled drives and good walks lead to the various buildings. All of these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and all are heated by steam or hot water. A complete system of sewerage has been provided. The buildings stand as indicated in the plat accompanying the following description:

College, 152 x 250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices, reception room, cloak rooms, studies, chapel, library, reading room, kitchen laboratory and dairy, sewing room, printing office, and 14 class rooms.

Chemical laboratory, one story, 26 x 90 and 46 x 75 feet of floor space, in form of a cross. It contains seven rooms, occupied by the department of chemistry and mineralogy.

Mechanics hall, 39 x 103 feet, two stories, and 40 x 80 feet, one story, occupied by wood and iron shops, finishing shop, class room, and music rooms. A foundry, 32 x 42 feet, is attached.

A central steam plant furnishes heat and power to the buildings.

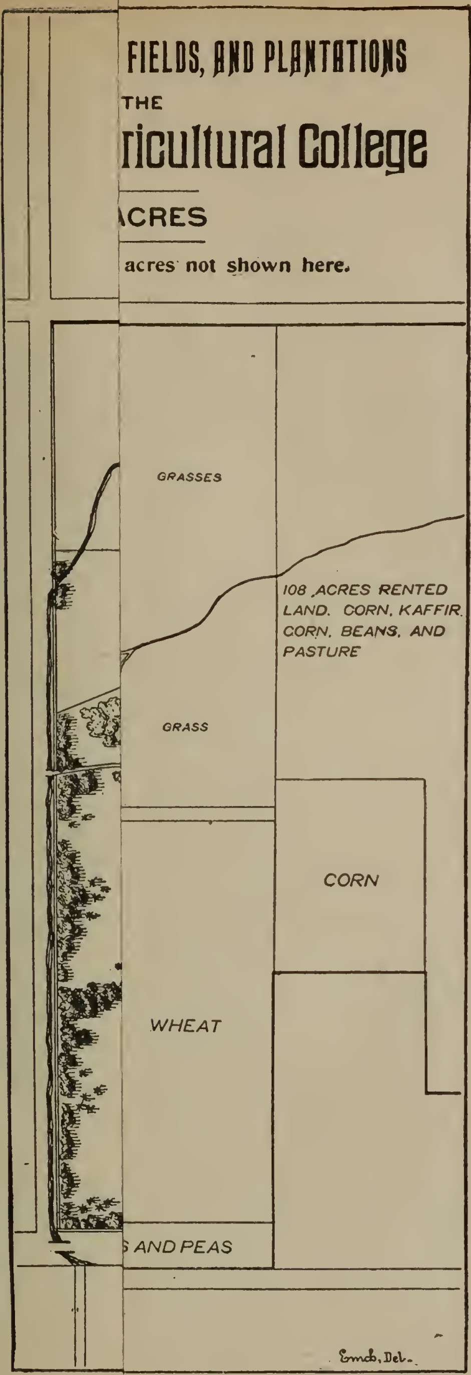
Horticultural hall, 32 x 80 feet, one story and cellar, having cabinet room, class room, and storage, with greenhouse attached.

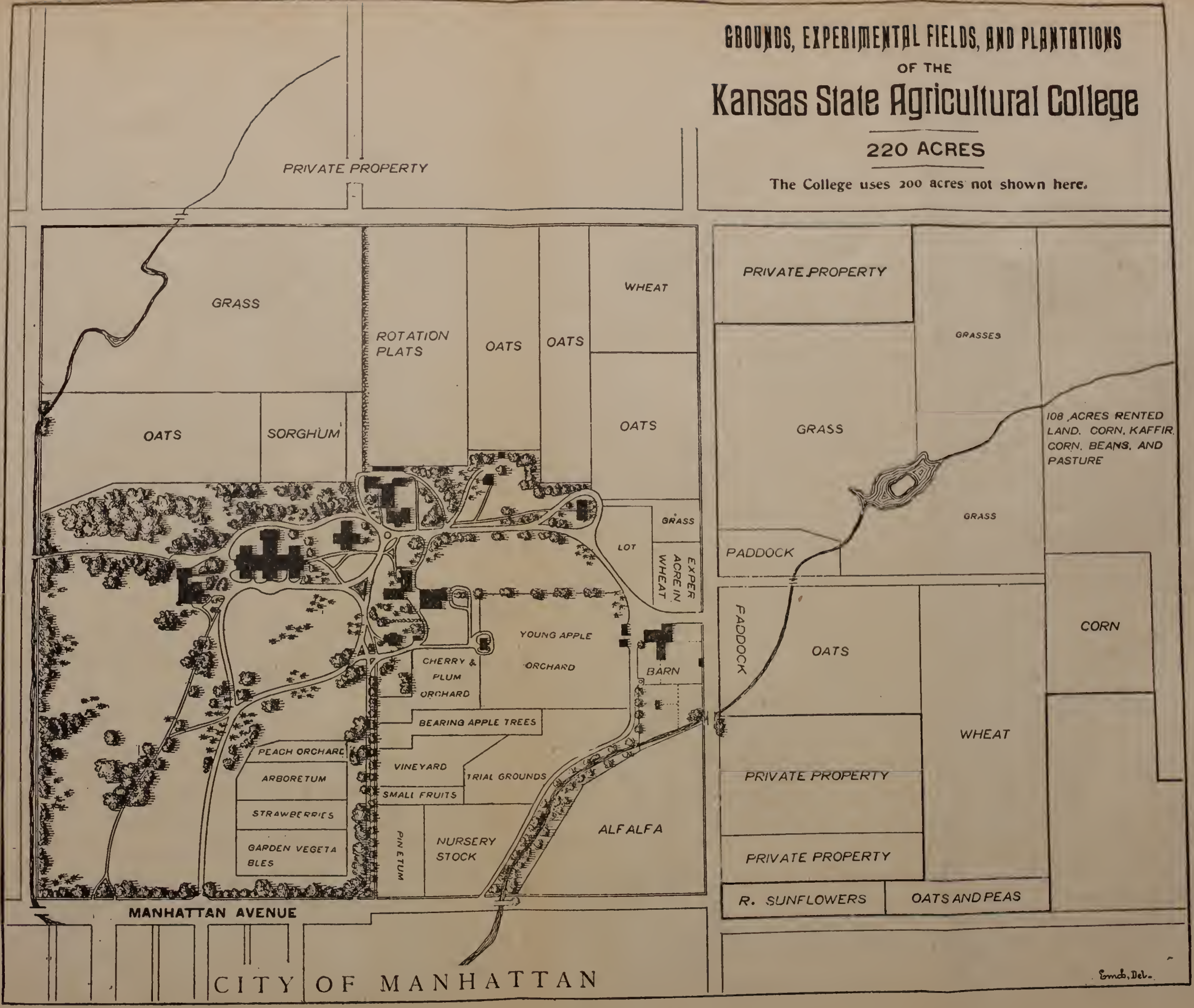
Horticultural laboratory, with six propagating houses attached.

Armory and veterinary laboratory, 46 x 96 feet, two stories. This building, which has served many purposes, is now fitted for an armory and drill room below, and for class room, laboratory and veterinary museum for the department of physiology and veterinary science above.

Library and agricultural science hall, 100 x 140 feet, three and four stories. This building provides permanent quarters for the library, with ample reading room; class rooms, laboratories, and cabinet room for zoölogy, entomology, and botany; a class room in history; and suitable rooms for the various College societies.

The farm barn is a double but connected stone structure, 50 x 75 feet and


FIELDS, AND PLANTATIONS
THE
ricultural College
ACRES
acres not shown here.
GRASSES
108 ACRES RENTED LAND. CORN. KAFFIR CORN. BEANS. AND PASTURE
GRASS
CORN
WHEAT
S AND PEAS
Emb, Del.



GROUNDS, EXPERIMENTAL FIELDS, AND PLANTATIONS
OF THE
Kansas State Agricultural College

220 ACRES

The College uses 200 acres not shown here.

48 x 96 feet, with an addition of sheds and experimental pens 40 x 50 feet. A basement, having stables for 75 head of cattle, silos, engine room, and granaries, underlies the entire structure.

The horticultural barn is a stone building, containing storeroom, granary, and stables for several horses.

The foundries, lumber house, implement house, piggery and various outbuildings are of wood.

One stone dwelling, occupied by the Professor of Agriculture.

LIBRARY.

The library consists of 15,300 bound volumes and about 5,000 pamphlets, and is valued at $28,300. It has been selected mainly with a view to supplementing the class-room instruction in the various departments. All the books are indexed in a card catalogue, so that the resources of the library upon any subject may be readily learned. All students have free access to the bookshelves, and may draw the books for home use, under simple and most liberal regulations.

The College subscribes for the leading literary, scientific and agricultural journals; while the principal daily and weekly papers of Kansas, and many from other states, are received in exchange for the college publications. All these are kept on file for the use of students and Faculty.

The College has been designated as the depository of United States public documents for the fifth congressional district of Kansas. About 1,887 volumes have already been received on this account.

The library is open daily, except on legal holidays, from 8 A. M. to 5:30 P. M. The Librarian or the assistant is in constant attendance at these hours to assist those who use the books.

An approximate estimate of the number of books, including public reports and bound periodicals, by classes, is as follows:

Classes.	*Vols.*	*Classes.*	*Vols.*
Agriculture	1,575	History	650
Horticulture	600	Biography	475
Mechanics and engineering	500	Geography and travels	350
Mathematics and astronomy	300	Dictionaries and cyclopedias	200
Physics and meteorology	375	Philology	150
Chemistry and mineralogy	475	Education	400
Geology	450	Law	110
Botany	550	Administrative reports	650
Zoölogy	375	Public documents on deposit	1,887
Entomology	175	Fiction, including juveniles	250
Physiology and sanitary science	325	Essays and literary criticisms	350
General science, proceedings, etc	700	Poetry	150
Military science	160	Logic and philosophy	240
Domestic science	110	Religion and morals	500
Political science	411	Fine arts	275
Bound magazines	1,475	Miscellaneous	200

Objects.

THIS College now accomplishes the objects of its endowment in several ways:

First, It gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second, It teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, botany, entomology, zoölogy and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science; and all are enforced by actual experiment.

Third, It trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household departments is made a part of a general education of usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth, It strives to increase our experimental knowledge of agriculture and horticulture. The provision for extensive and accurate researches, made by establishing the Experiment Station as a distinct department of the College, offers assurance of more definite results than can be obtained by ordinary methods. The professors of agriculture, horticulture, chemistry, botany, and veterinary science, together with the President of the College, form the Experiment Station Council, by authority of which experiments are undertaken and carried on in the several departments, under the special supervision of the professors. These touch "the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

The bulletins of the Station, issued at least as often as once in three months, are sent, according to law, free of postage, to all newspapers in the state, and "to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." Correspondence with reference to bulletins and experiments is welcomed, and may be addressed to the several members of the Council.

Fifth, It seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose, farmers' institutes have been organized in about 50 counties of the state, in which from two to four members of the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers and their families. These institutes, held for the past 14 years, have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented. The members of the Faculty desire correspondence as to farmers' institutes or any questions of practical interest in agriculture or related sciences.

The *Industrialist,* published weekly, and edited by Faculty and students, gives a wide circulation to matters of similar interest in the College. To serve a similar end, a course of 30 lectures is given at the College during two weeks in February of each year, to which farmers from all parts of the state are invited. Members of the Faculty are also prominently connected with state associations for the promotion of agriculture, horticulture, the natural sciences, and education in general.

Methods.

THE necessity for so adjusting various branches of a course of study that there shall be as little waste as possible in acquiring both information and discipline, is felt by every teacher. Such a course is not designed to be absolutely inflexible, but to guide the judgment into some definite line of progress from which no mere whim shall turn a student aside. Students in irregular courses are expected to take the equivalent for the required duties of the term; variations from this rule can be made only with the consent of the Faculty.

Parallel courses are offered to both sexes, with such differences as their necessities seem to call for. The following gives the general scope of the two, but fuller explanations are found under "Outline of Instruction":

COURSE OF STUDY.

[Numerals denote number of class hours per week. When no work outside of class is required, italics are used.]

FIRST YEAR.

Fall Term.....Algebra, 5.
14 weeks. English Analysis, 5.
Botany, 5.
Free-hand Drawing, 3.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 4.

Winter Term..Algebra, 5.
12 weeks. English Composition, 5.
Bookkeeping, one-half term, 5. Commercial Law, 1.
Geometrical Drawing, one-half term, 5. ✓
Rhetoricals, 1.
Industrial, 5.
Military Drill, 3.

Spring Term...Algebra, 5.
11 weeks. English Structure, 5.
Elementary Physics, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 5.

SECOND YEAR.

Fall Term.....Geometry, 5.
14 weeks. Horticulture, 5.
Inorganic Chemistry, 5. *Laboratory work*, 2.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 4.

Winter Term. . Geometry, one-half term, 5.
12 weeks. Projection Drawing, one-half term, 5.
Agriculture, for young men, 5.
Household Economy, for young women, 5.
Organic Chemistry, one-half term, 5.
Mineralogy, one-half term, 5. *Laboratory work*, 5.
Military Science, one-half term, 2.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 3.

Spring Term. . . Descriptive Geometry, 5.
11 weeks. Entomology, 5.
Analytical Chemistry, 10.
Military Science, 2.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 5.

THIRD YEAR.

Fall Term. . . . . Trigonometry and Surveying, 5. *Surveying Practice*, 2.
14 weeks. General History, 5.
Anatomy and Physiology, 10 weeks, 5.
Chemistry of Foods, four weeks, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Winter Term. . Mechanics, 5.
12 weeks. Civics, 5.
Zoölogy, 5.
Map Drawing, about 30 hours a term.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Spring Term. . . Political Economy, 5.
11 weeks. Rhetoric, 5.
Agricultural Chemistry, 5.
Perspective and *Sketching*, 4.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

FOURTH YEAR.

Fall Term. . . . . Physics and Meteorology, 5.
14 weeks. English Literature, 5.
Agriculture, for young men, 5.
Hygiene, for young women, 5.
Object Drawing, 4.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Winter Term. . Physics, one-half term, 5.
12 weeks. History of Industry and Science, one-half term, 5.
Psychology, 5.
Botany, 5.
Veterinary Science, for young men, 5.
Floriculture, for young women, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Spring Term . . Geology, 5.
11 weeks. Logic, 5.
Engineering, for young men, 5.
Literature, for young women, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Students desiring additional training in special lines of study are reommended to extend their course one year. During the fourth year they will then be permitted to choose one elective and during the fifth year two electives, in place of required studies.

ELECTIVES IN EXTENDED COURSE.

[A number of the studies named below must be preceded by certain other studies. Consult the index to find the fuller information given under "Outline of Instruction."]

Fall Term..... Irrigation and Drainage, 2. Reference reading on feeding.
14 weeks. Fruit Culture, 5.
Origin of Cultivated Fruits and Vegetables, 5.
Vegetable Morphology and Ecology, 3.
Vegetable Physiology, 2.
German Botany, 2.
General Entomology, 5.
Systematic Entomology, 5.
Animal Morphology, 5.
Systematic Zoölogy, 5.
Contagious and Infectious Diseases of Animals, 5.
General Review of Human Anatomy, 5.
Advanced Inorganic Chemistry, 5.
Quantitative Chemical Analysis, 5.
Materials of Engineering, 5.
Applied Mechanics, 5.
Analytic Geometry, 5.
Heating, Ventilation, and Drainage, 5.
Comparative Politics, 5.
Distribution of Wealth, 5.
Taxation, Tariff, Railway Transportation, 5.
Hygiene, 5.
Foods for the Sick, 5.

Winter Term . . Dairy Breeds and Dairying, 5.
12 weeks. Forestry, 5.
Greenhouse Construction and Management, 5.

Cryptogamic Botany, 5.
German Botany, 5.
General Entomology, continued, 5.
Systematic Entomology, continued, 5.
Animal Morphology, continued. Development, 5.
Systematic Zoölogy, special, 5.
Theory and Practice of Veterinary Medicine, 5.
Advanced Human Physiology, 5.
Advanced Inorganic Chemistry, continued, 5.
Quantitative Chemical Analysis, 5.
Physics, 5.
Machine Design and Hydraulics, 5.
Differential Calculus, 5.
Descriptive Geometry of Double, Curved and Warped Surfaces, 5.
Graphic Statics, 5.
Comparative Municipal Government, 5.
Money, 5.
Banking, 5.
Bread, Meats, Salads, 5.

Spring Term... Grain and Forage Crops, 5.
11 weeks. Maintaining Soil Fertility, 2.
Vegetable Gardening, 5.
Ornamental Gardening, 5.
Systematic Botany, 3.
Economic Botany, 2.
German Botany, 2.
Entomological Methods, 5.
Economic Entomology, 5.
Zoölogical Distribution and Evolution, 5.
Comparative Anatomy and Physiology, 5.
Materia Medica and Surgery, 5.
Organic Chemistry, 5.
Quantitative Chemical Analysis, 5.
Physics, 5.
Steam-Engine Design, 5.
Measurement of Power. *Laboratory Practice*, 5.
Integral Calculus, 5.
Historic Ornament, 5.
Architectural Composition, 5.
Constitutional Law, 5.
Principles of Sociology, 5.
Socialism and Social Reforms, 5.
General Cooking, 5.
Cake, Pastry, Dessert, 5.

INDUSTRIAL TRAINING.

Closely adjusted to the course of study is industrial training in several of the arts, to which each student is required to devote at least one hour a day. Among the lines of training, each student may select, with the approval of the Faculty, except in terms when special industrials are required. Young men may have farming, gardening and fruit growing, woodwork and ironwork, or printing. Young women may take cooking, sewing, printing, floriculture, or music. The training in these departments is designed to be systematic and complete in each, so that a student following a single line diligently through the four-years course gains the essentials of a trade and a reasonable degree of skill. Those who wish only a general training in the arts can take shorter courses in several of them.

All young men must have their industrials for one term in the carpenter shop before completing the first year; and during the spring term of the second, and the fall term of the third year, upon the farm, garden, and orchards. Young women take their industrial for one term of the first year in sewing, and for the winter and spring terms of the second year in the kitchen laboratory and dairy.

POSTGRADUATE COURSES.

Arrangements can be made for advanced study in the several departments at any time, and outlines of courses will be furnished on application. The electives of the "Extended Course" are open to graduates, and special opportunities will be given for investigation and research. Every facility for advancement in the several arts taught at the College will be afforded such students, though they are not required to pursue industrial training while in these courses.

DEGREES.

The degree of Bachelor of Science is conferred upon students who complete the full course of four years and sustain all the examinations. This degree entitles the holder to credit for studies pursued in any application for state teacher's certificate. (See Laws of 1893.)

Students who extend the course one full year will receive mention on the diploma of special proficiency in those lines of study which they have pursued as an elective for not less than three terms.

The degree of Master of Science is conferred in course upon graduates who comply with the following conditions:

1. Upon candidates resident at least one year, the degree may be conferred at the end of a two-years course; upon nonresident candidates, the degree may be conferred at the end of a three-years course; upon candidates who have taken the "Extended Course," it may be conferred at the end of a one-year postgraduate course. These courses must be outlined by, or be acceptable to, the Faculty.

2. Each candidate shall furnish evidence satisfactory to the Faculty of proficiency in at least one of each of the groups of arts and sciences here named:

ARTS.	SCIENCES.
Agriculture.	Botany.
Horticulture.	Chemistry.
Engineering.	Zoölogy.
Architecture and Designing.	Entomology.
Domestic Economy.	Physics.

If higher mathematics or political economy be taken as a third minor study, due credit will be given in estimating proficiency.

3. Each candidate must present for consideration by the Faculty a satisfactory thesis, involving original research in line with one or the other of the courses pursued above, and shall deposit a perfect copy in the College library.

4. Application to the Faculty for sanction of the lines of study and research should be made as early as the 1st day of November.

5. The subject of the thesis must be settled upon as soon as the 1st day of January preceding the commencement at which the degree is expected.

In a resident postgraduate course of study, as provided for by rule 1, the work required shall be the equivalent of that necessary to pursue three full studies, the time in the aggregate to be divided approximately into three equivalents, two to the major and one to the minor study.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of Master of Science may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the master's degree must be a graduate of at teast three years' standing, and a resident of Kansas.

2. His postgraduate study shall have been in line with that required of graduates of this College, as published in our catalogue.

3. He must make application for the degree on or before the first day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1, an abstract of the thesis must be submitted to the Faculty.

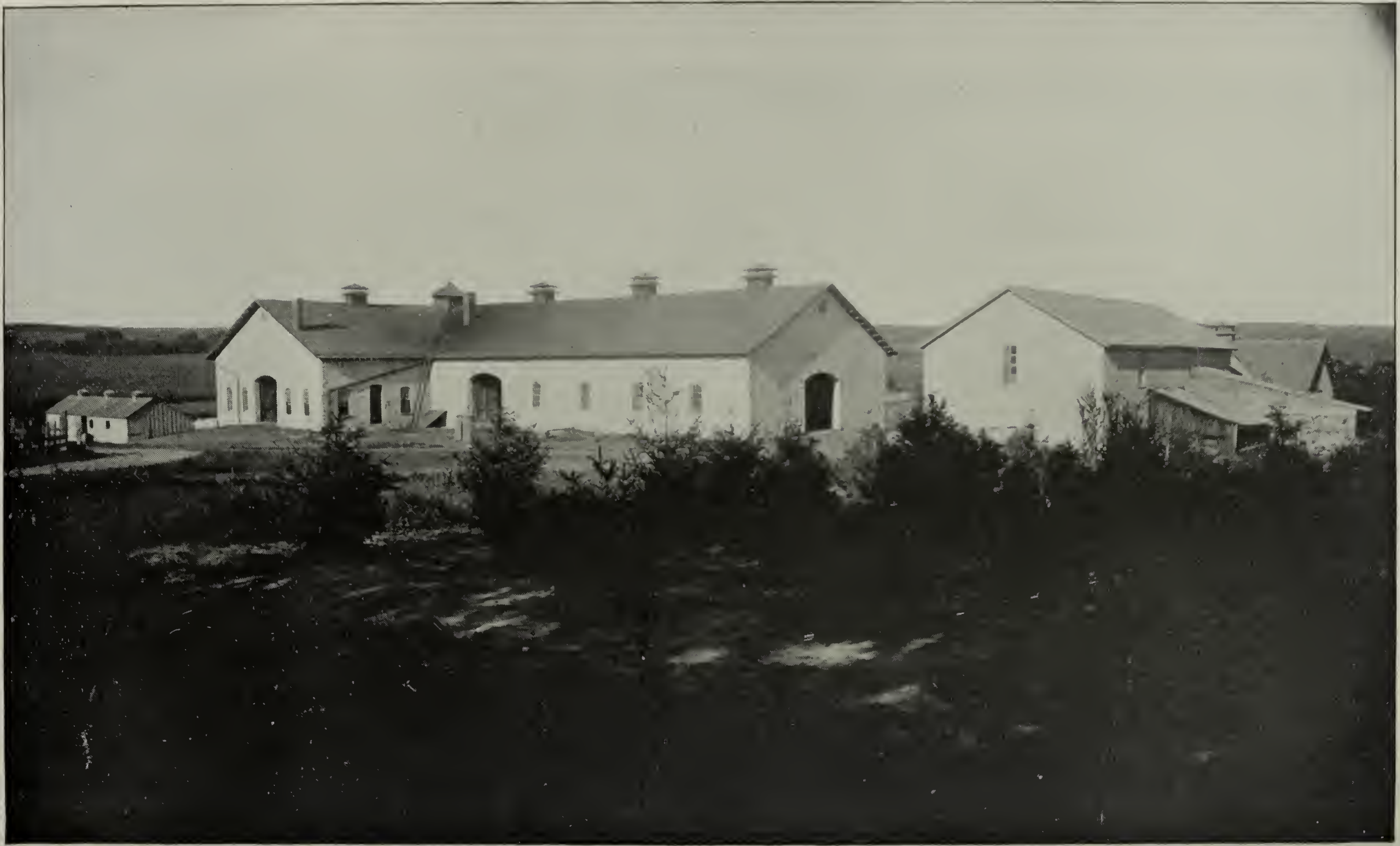
5. Before May 15, the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

SPECIAL COURSES.

Persons of suitable age or advancement, who desire to pursue such branches of study as are most directly related to agriculture or other industries, may select such studies under the advice of the Faculty.

SHORT LECTURE COURSE FOR FARMERS.

Beginning on the first Tuesday of February each winter, a two-weeks course of lectures is given on agriculture and related arts and sciences. This is provided for those farmers and others who cannot take up the fuller work of the regular College classes. Members of the Faculty are assisted in delivering these lectures by prominent farmers, stock raisers and fruit growers of the state; and full discussions of the topics presented bring out the varied experiences of those attending.



BARN AND SHEDS.

CROSSCUP & WEST ENG. CO.
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STUDENTS JUDGING THE DAIRY CATTLE.

CLASS HOURS—1894-'95.

(Monday to Friday. Saturday Free.)

	HOUR.	FIRST YEAR.			
FALL TERM—14 WEEKS.	8:00	Military Drill. Calisthenics.			
	8:45	Chapel Exercises.			
	9:00	Botany.	Rhetoricals, Th. Free-hand Drawing.	English Analysis.	Algebra, I.
	9:50	English Analysis.	Industrials.	Bookkeeping. Geom. Drawing.	Geom. Drawing. Bookkeeping.
	10:40	Algebra.	English Analysis.	Industrials.	Rhetoricals, Th. Free-hand Drawing.
	11:30	Rhetoricals, T. Free-hand Drawing.	Botany.	Algebra, I.	Industrials.
	12:20	Industrials.	Algebra, I.	Rhetoricals, T. Free-hand Drawing.	English Analysis.
	1:40	Ironwork, Farm, Garden, Singing Classes, except Friday.			
WINTER TERM—12 WEEKS.	8:30	Chapel Exercises.			
	8:50	Algebra, II.	Industrials.	English Composition.	Elementary Physics.
	9:40	Bookkeeping. Geom. Drawing.	Geom. Drawing. Bookkeeping.	Industrials.	Algebra, II.
	10:30	English Composition.	English Structure.	Elementary Physics.	Industrials.
	11:20	Industrials.	Algebra, II.	Rhetoricals, T. Commercial Law, F. Tactics, W. Drill, M. Th.	Rhetoricals, F. Commercial Law, T. Tactics, W. Drill, M. Th.
	12:10	Rhetoricals, T. Commercial Law, F. Drill, M. Th. Tactics, W.	Rhetoricals, F. Commercial Law, T. Drill, M. Th. Tactics, W.	Algebra, II.	English Composition.
	1:30	Ironwork, Singing Classes.			
	8:00	Military Drill. Calisthenics.			
	8:45	Chapel Exercises.			
	9:00	Algebra, III.	Industrials.	English Structure.	Botany.
	9:50	Elementary Physics.	Algebra, III.	Industrials.	English Structure.
	10:40	English Structure.	Elementary Physics.	Algebra, III.	Industrials.
	11:30	Rhetoricals, F. Industrials.	English Composition.	Botany.	Algebra, III.
	12:20		Rhetoricals, T.	Rhetoricals, W.	Rhetoricals, Th.
	1:40	Rhetoricals, Ironwork, Farm, Garden, Singing Classes.			

CLASS HOURS—1894-'95.

(Monday to Friday. Saturday Free.)

	HOUR.	SECOND YEAR.			
FALL TERM — 14 WEEKS.	8:00	Military Drill. Calisthenics.			
	8:45	Chapel Exercises.			
	9:00	Geometry.	Horticulture.	Industrials.	Entomology.
	9:50	Horticulture.	Geometry.	Chemical Practice, T. Th. Rhetoricals, M.	Chemistry.
	10:40		Industrials.	Geometry.	Chemical Practice, M. W. Rhetoricals, T.
	11:30	Chemical Practice, T. Th. Rhetoricals, F.	Chemistry.	Entomology.	Industrials.
	12:10	Chemistry.	Chemical Practice, M. W. Rhetoricals, Th.		Algebra, III.
	1:40	Ironwork, Farm, Garden, Singing Classes, except Friday.			
WINTER TERM, 12 WEEKS.	8:30	Chapel Exercises.			
	8:50	Agriculture.	Geometry. Drawing.	Household Economy.	
	9:40	Organic Chemistry. Blowpipe.	Agriculture.	Blowpipe. Organic Chemistry.	Geometry.
	10:30	Geometry. Drawing.	Blowpipe. Organic Chemistry.	Drawing. Geometry.	Organic Chemistry Blowpipe.
	11:20	Rhetoricals. Drill, M. Th. Military Science, T. F.	Rhetoricals. Drill, M. Th. Military Science, T. F.	Mineralogy. Cooking.	Cooking. Mineralogy.
	12:10	Cooking. Mineralogy, 6 wks.	Mineralogy, 6 wks. Cooking.	Rhetoricals. Military Science, T. F. Drill, M. Th.	Drill, M. Th. Mil. Science, T. F. Rhetoricals.
	1:30	Industrials for Young Men, Singing Classes.			
SPRING TERM, 11 WEEKS.	8:00	Military Drill. Calisthenics.			
	8:45	Chapel Exercises.			
	9:00	Des. Geometry.	Horticulture.	Analytical Chemistry.	
	9:50	Entomology.	Des. Geometry.		
	10:40	Rhetoricals, T.	Rhetoricals, Th. Dairy.	Entomology.	Geometry.
	11:30	Analytical Chemistry.		Des. Geometry.	Horticulture.
	12:20			Rhetoricals. F.	Rhetoricals. Dairy.
	1:40	Farm and Garden, Singing Classes.			

CLASS HOURS—1894–'95.

(Monday to Friday. Saturday Free.)

HOUR.	THIRD YEAR.		FOURTH YEAR.	
8:00	Drill, optional.		Drill, optional.	
8:45	Chapel Exercises.		Chapel Exercises.	
9:00	Chem. of Foods. Des. Geometry.	General History.	Agriculture.	Hygiene.
9:50	General History.	Trigonometry and Surveying.	English Literature.	Physics.
10:40	Trigonometry and Surveying.	Des. Geometry. Chem. of Foods.	Physics.	Rhetoricals, W. Drawing.
11:30	Rhetoricals, M. Surveying Practice.	Industrials.	Rhetoricals, W. Drawing.	English Literature.
12:20	Industrials.	Rhetoricals, M. Surveying Practice.		
1:40	Farm and Garden.		Industrials, two days.	
8:30	Chapel Exercises.		Chapel Exercises.	
8:50	Zoölogy.	Mechanics.	Psychology.	
9:40	Drill, optional. Industrials.	Civics.	Veterinary Science.	Floriculture.
10:30	Civics.	Zoölogy.	Botany, A.	Botany, B.
11:20	Mechanics.	Rhetoricals, M. Map Drawing.	Botany, A. Rhetoricals.	Rhetoricals. Botany, B.
12:10	Rhetoricals, M. Map Drawing.	Drill, optional. Industrials.	Physics. Hist. Industries.	Hist. Industries. Physics.
1:30	Industrials for Young Men.		Botany, two days. Industrials, two days.	
8:00	Drill, Calisthenics, optional.		Drill, Calisthenics, optional.	
8:45	Chapel Exercises.		Chapel Exercises.	
9:00	Rhetoricals, M. Pers. Drawing.	Political Economy.	Engineering.	Literature.
9:50	Agricultural Chemistry.	Rhetoric.	Logic.	Political Economy.
10:40	Rhetoric.	Agricultural Chemistry.	Political Economy.	Logic.
11:30	Political Economy.	Rhetoricals, M. Pers. Drawing.	Rhetoricals.	Rhetoricals, W.
12:20	Rhetoricals. M. Pers. Drawing.	Industrials.		
1:40	Industrials for Young Men.		Industrials.	

Outline of Instruction.

Agriculture.

Second Year, Winter Term.—History of agriculture, showing the successive steps by which the art has attained its present position. History and characteristics of breeds: Their adaptation to the varying conditions of soil, climate, and situation; study of the forms of animals, as shown by the different breeds belonging to the College; the relation of stock raising to general farming. Cultivation of hoed crops; management of corn and roots with reference to stock feeding, and the growth of the finer grains. The growth of the tame grasses in Kansas: The best sorts for the state, and their management, as shown by experience upon the College farm and elsewhere. Implements of simple tillage: Mechanical principles involved in their construction. Application of labor. Draught: Different adjustments as affecting draught. Plows for soil and subsoil. Drainage: Soils that need drainage; how to lay out a system of drains.

Fourth Year, Fall Term.—General principles governing the development of domestic animals: The laws of heredity—of normal, abnormal and acquired characters; atavism; correlation in the development of parts; in-and-in breeding and crossbreeding; influences affecting fecundity. The selection and arrangement of the farm with reference to the system to be pursued. Rotation of crops: General advantages of a rotation; the best rotation for the distribution of labor, production of manure, and extermination of weeds. Planning farm buildings—barns, piggeries, and stables. Manure: How best saved and applied; composting; commercial fertilizers. Agricultural experiments; field and feeding experiments. Stock feeding and meat production: Compounding rations, stall feeding. Soiling.

Extended Course—Fall Term.—Elective work may be taken two hours a week in Irrigation and Drainage, with reference reading on these subjects and on feeding.

Winter Term.—Elective work is offered in Dairying, comprising a review of dairy breeds, management of dairy cattle and milk production, and the manufacture of butter and cheese. Recitations, five hours a week.

Spring Term.—Elective work is offered as follows: (1) Lectures and recitations, five hours weekly, on grain crops and forage crops, with referenc reading on these subjects. (2) Lectures and recitations, two hours weekly on maintaining soil fertility and the application of manures, and referenc reading on these subjects; but this subject must be preceded by the require agriculture, agricultural chemistry, and vegetable physiology.

Farm Work.—The young men are required to work on the farm five hou a week during half of the spring term of the second year, and half of the fall term of the third year, in all representing 60 hours' required work, for which they are remunerated according to their efficiency, the maximum rate of pay being 10 cents an hour. No pay is given when the work is designed solely for the instruction of the students. This required work is, for the most part, connected with the various field experiments under way on the farm, and is planned with a view to familiarize the student as far as possible with these experiments and our methods of working. Aside from this required work, students are allowed to work on the farm at all times when help is needed, the maximum remuneration during term time being 10 cents an hour, and during vacation, 12½ cents, and so fully do they avail themselves of this privilege that all the work on the farm is done by students. The whole farm is under experiment, and those obtaining work there have opportunity to learn the nature and results of these experiments. They also aid in caring for the various breeds of cattle, sheep and hogs kept on the farm. Students of marked ability in agriculture are often employed as foremen, for which they are paid 15 cents an hour.

Means of Illustration.—Two hundred and eighty acres of land used for farm purposes, with hundreds of plats under experiment in grain, grasses, and forage crops; and illustrating various methods of culture and rotation.

A barn 50x75 feet, expressly arranged for experimental uses; and connected with it a general-purpose barn, 48x96 feet, for grain, hay, horses, and cattle. Both buildings are of stone, and are provided with steam power, and equipped with improved machinery for shelling, grinding, thrashing, cutting for the silo, and steaming.

Two piggeries—one of 10 pens, for experimental uses, and one of 6 pens, with separate yards, for general purposes.

An implement house 22x50 feet, of two stories, and corncribs.

Shorthorn, Aberdeen-Angus, Hereford, Holstein-Friesian and Jersey cattle; Berkshire and Poland-China swine; and Shropshire sheep.

Farm implements of improved patterns.

Collections of grains, grasses, and forage plants.

Buildings, stock and equipments are valued at $27,000.

Horticulture.

Second Year, Fall Term.—It is the aim to teach this art from a botanical basis. The student applies his knowlege of the prime facts in botanical physiology to the various operations of the nursery, orchard, and farm. Instruction is given by a series of lectures upon the following topics, among others: The scope of horticulture. General principles of propagation—by buds, by seeds. Production of improved varieties—by careful selection of seeds, by interfertilization of known kinds. Perpetuation of valuable sorts of fruits by bud propagation—budding, grafting, layering, etc. The important points in nursery manipulation. The orchard: Conditions of site, soil, exposure, elevation; special treatment of different kinds of fruit trees; pruning; gathering and storing fruits. Small-fruit culture: List of varieties suitable for Kansas planting. Vegetable garden: Selection and preservation of seed; planting and transplanting; the management and use of hotbed and cold frame. Two weeks of the term are devoted to class-room practice in the making of cuttings and apple grafts.

Floriculture.—In the winter term of the fourth year the young women study floriculture, the subject including general greenhouse management; the treatment of plants in window gardening, the growing of flowering plants in the open air, the destruction of plant pests, etc.; practice in the plant houses alternating with lectures on these topics.

EXTENDED COURSE—*Fruit Culture.*—Fall term. This course includes a study of the leading orchard and small fruits and grapes adapted to culture in the West; a discussion of the best methods of planting, pruning, and training, followed by a study of the distinctive characters of varieties; merits for home use and for market; keeping qualities; best methods of gathering, handling, storing, and marketing. Lectures.

Forestry.—Winter term. A study of the native trees of Kansas and adjacent states will be made, with special reference to their distribution and adaptation to variations of soil and climate, also of the native and introduced species best adapted to use in forest plantations and shelter belts; selection and arrangement of varieties in plantations; raising of seedlings; planting, culture and management of trees for timber and for wind-breaks; commercial timbers of the United States. Lectures.

Vegetable Gardening.—Spring term. The subjects treated are soil, location and preparation of ground for garden; use of glass structures in raising vegetables and plants; special methods of planting and culture of the leading vegetable crops for market and for home use; varieties best adapted to Kansas culture; garden irrigation. Lectures.

Horticulture.—Fall term. A topical study is made of the more important cultivated fruits and vegetables, as to their origin, introduction, and improvement by culture, selection, and hybridizing. This work is intended to be done largely in the library, the student's researches being directed and advised by the professor in charge.

Greenhouse Construction and Management.— Winter term. The student will devote this term to the study of the principles of construction and heating of the various glass structures used in horticulture. The handbook of Professor Taft on "Greenhouse Construction" will be used as the basis of this work, supplemented by a study of the greenhouses and propagating pits on the grounds.

Ornamental Gardening.—Spring term. Two lectures each week on the ornamental plants, shrubs and trees most valuable for use in Kansas; some elementary principles of landscape planting; planning of home grounds; location and construction of walks and drives; grouping of trees and shrubs—

these lectures to be supplemented by three days' work of the student in the College greenhouses, gardens, and grounds, becoming familiar with the large collections of plants and trees to be found there, and in the library, in the study of their botanical and cultural history.

Horticultural Work.—Young men are required to take this industrial during half of the spring term of the second year, and half of the fall term of the third year. Here students are given practical instruction in the planting and arrangement of nursery stock, digging and planting of trees, pruning and training of trees and vines, transplanting and management of small fruits, use of hotbeds and cold frames, and general vegetable gardening. Special students during the winter term receive more advanced instruction in the various methods of propagation, in grafting room and greenhouses. Students who show special proficiency in horticulture are often employed as foremen. Work done in this department is paid for at the same rate and is governed by the same rules as in the farm department.

Means of Illustration.—Orchards containing 100 varieties of apples, 30 of peaches, 10 of pears, 20 of plums, 30 of cherries, and 5 of apricots.

Small-fruit garden, with 200 varieties of small fruits, including blackberries, raspberries, gooseberries, currants, and strawberries; and vineyard, with 160 varieties of grapes.

Forest plantation of 12 acres, containing 20 varieties, of from 1 to 25 years' growth.

Ornamental grounds, set with a variety of evergreens and deciduous trees. Sample rows, containing about 150 varieties of ornamental and useful shrubs and trees, labeled.

Vegetable garden, with hotbeds and cold frames, and experimental beds. Practice row for students' budding, grafting, cultivating, and pruning.

A well-planned and furnished greenhouse of three rooms, stocked with a fine collection of native and exotic plants; three propagating pits, 12x70 feet, for experimental work, and three others of the same size with commodious workroom adjoining, and equipped with the best improvements for the use of the young women in the practice of floriculture.

A tool room containing 50 individual cases of horticultural tools, besides tools and implements for general use, and pumps and apparatus for spraying with fungicides and insecticides.

Museum, containing a collection of woods from American forests, seeds of many varieties of vegetables, and a herbarium of cultivated grapes.

Value of property, exclusive of orchards and grounds, $16,000.

Botany.

Elementary Botany.—Instruction in this branch is given during the fall term of the first year. The text-book used is Bastin's Elements of Botany. This is supplemented by daily field work, which in the main runs parallel with the text-book. The aim in the field work is to teach the student how to observe, and how to draw conclusions from his observations. The following are a few of the subjects studied: Germination of corn, bean or other common seed; opening of buds; falling of leaves; various fruits and their adaptations for dissemination; pollination and adaptations for cross fertilization. These notes and observations, together with the necessary drawings, are submitted from time to time for examination and criticism. In addition to this, each student prepares a herbarium of not less than 50 species of native plants. These are named by the aid of Gray's Manual of Botany, sixth edition, or by a key to the genera of Manhattan plants, prepared by the Professor of Botany. The students are required to provide themselves with a pocket lens, under the direction of the professor in charge. Those students who intend to finish the course can save the additional expense by purchasing the textbook used in the advanced botany, since this includes the smaller work.

Advanced Botany.—In the winter term of the fourth year, the minute structure of plants is studied in the laboratory by the aid of the compound microscope. This includes an examination of the vegetable cell and of various tissues and tissue systems, and of the cell contents, such as protoplasm, chlorophyl, starch, crystals, etc. A few types of cryptogamic plants are studied, but the chief part of this is necessarily left till later.

Each student has the use of a compound microscope, with the necessary tools and reagents. The text-book used is Bastin's College Botany. Each student is required to prepare a herbarium of not less than 25 species of twigs. These are named by the aid of a pamphlet prepared by the Professor of Botany. A good herbarium and a large greenhouse are drawn upon for material for study.

EXTENDED COURSE—*Morphology and Ecology.*—Fall term, three days per week. The former includes a study of the organs of plants, their modifications to perform various functions, and a comparison of these organs in plants of various degrees of development. The latter is that part of vegetable physiology which treats of plants as organisms, and would include such topics as germination, pollination, insectivorous plants, symbiosis, adaptation to climate.

Systematic Botany.—Spring term, three days per week. A study is made of the natural orders of phenogamous plants, their characters and relationships.

Vegetable Physiology.—Fall term, two days per week. This deals with the chemical and physical problems presented in living plants, such as the absorption of food, elaboration of organic material, transfer of food, action of light. This course should be preceded by the required physics, the advanced inorganic chemistry of the fall term, and the required fourth-year botany.

Cryptogamic Botany.—Winter term. During this term the principal types of fungi, algæ, mosses and ferns are studied. This course should be preceded by the required botany of the fourth year and the first term of the advanced zoölogy.

Economic Botany.— Spring term, two days per week. A study of the economic products of the vegetable kingdom, their origin, history, and uses. This should be preceded by forestry and systematic botany.

Those who do not wish mention of special proficiency in botany may be admitted to the courses without the requirements in chemistry, physics, zoölogy, and horticulture.

In addition to the above, a course is offered in *German Botany.* It extends through the year: two days per week in the fall term (devoted to the elements of German grammar), five days per week in the winter term, and two days per week in the spring term. The aim of the course is to enable students to read German botanical works.

Means of Illustration.—A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the state; a twig herbarium, illustrating woody plants in their winter condition; and a seed herbarium, containing a representative collection of seeds and fruits; also 28 compound microscopes, four dissecting microscopes, tools, reagents, etc. The department is provided with a zinc culture room, and the ordinary apparatus for bacteriological work; a dark room and apparatus for photography; microtomes and other apparatus for microtomic work. Valued at $5,000.

Zoölogy and Entomology.

Entomology.— Spring term, second year. In the elementary work of the second year, the intention is to give the student a basis for intelligent appreciation of the important relations of the science to agriculture and horticulture. A brief view of structural types precedes an outline of insect classification, and a special study of the economic bearing of the subject completes the work. Illustrative material is furnished from the individual collections of the students and from the college museum. Charts and drawings from nature are used to illustrate points of value in classification. The pocket lens used in botany is required in this study. Text-book, Comstock's Manual for the Study of Insects, abridged.

Extended Course.—The student electing entomology in his fourth year reviews through the fall and winter terms the general subject as a necessary introduction to the special work of the terms following. The work of these two terms, however, is complete in itself. The text-book is Comstock's Manual, extended. In the spring term, the time is given to entomological methods, including field work in observation and collecting, laboratory work in preparation, dissection, and preservation, and in the study of life histories by the aid of the vivarium.

In the fall and winter terms of the fifth year, the student pursues the independent and critical study of systematic entomology, the work in which may be restricted when desired to groups of special agricultural importance.

This course is followed in the spring term by lectures and practice in economic entomology.

After the winter term of the fourth year, the work in this course is dependent in each term upon the preceding work in the same line, and is most profitably taken in the order of sequence given.

Zoölogy.—Winter term, third year. Using Orton's Zoölogy as a text-book, the student becomes acquainted with the basis of zoölogical classification. The comparison of selected types and the study of available forms by the aid of keys is also a part of the work of the term.

Extended Course.—The fall and winter terms of the fourth year are given to a study of morphology, in which a series of dissections of selected types is made. A short series of lectures on development closes the winter term. In the spring, the student is recommended to take the work of that term in the entomological course, the instruction in which may be sufficiently varied to be of equal use to both.

The study of systematic zoölogy is begun in the fall term of the fifth year, and by the selection of special groups is carried through to the end of the winter term. In the spring, a course of lectures outlines the principles in the geographical and geological distribution of animals, and presents the main features of evolution. Reference studies, and essays by the student, are a part of the work.

The studies of this course should be taken in the order given.

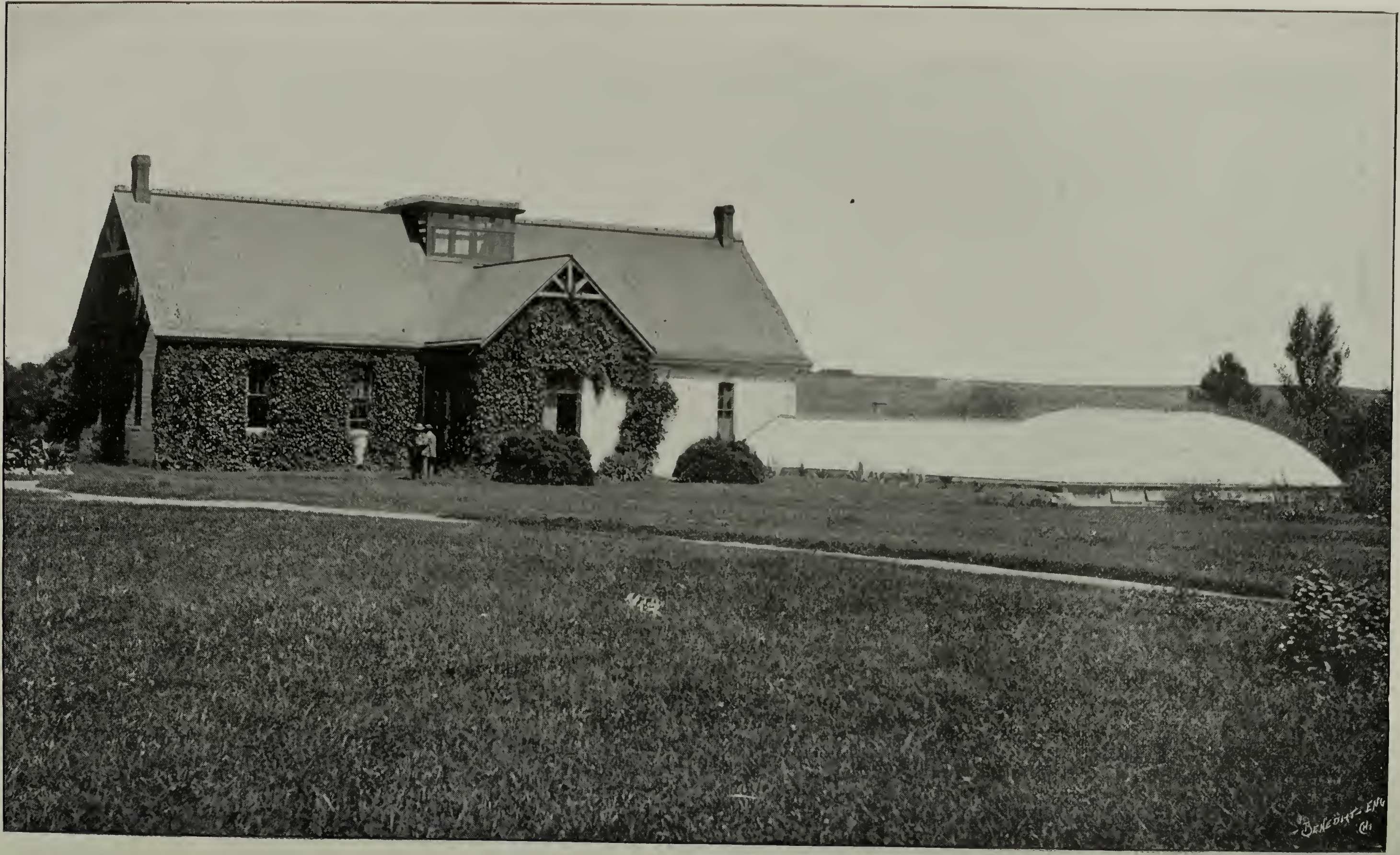
Means of Illustration.—The zoölogical museum, containing numerous representatives of the several classes, especially full in the fishes and mollusks of Kansas, and in illustrations in economic and systematic entomology. Increasing material in skins, alcoholic and anatomical preparations are available also for the use of the student. Value, including cases, $8,000.

Anatomy and Physiology.

Anatomy and Physiology.—10 weeks, fall term, third year. Human anatomy is made the basis of a thorough study in physiology and hygiene. This includes such subjects as digestion and food; circulation of the blood; respiration and ventilation; secretion and excretion; the nervous system; and the special senses. The course embraces, to some extent, comparative anatomy and physiology, affording preparation for the study of stock breeding, zoölogy, and veterinary science. Martin's Human Body is used as a textbook. Skeletons and an Azoux manikin, with charts and drawings, furnish the means of demonstration. Valued at $1,200.

Extended Course.—This will include a general review, with advanced work in anatomy and physiology, human and comparative. It will be supplemented by dissection and experimental work in the laboratory. These studies must be taken in the following order: General review of anatomy, advanced physiology, comparative anatomy and physiology.

Special Hygiene.—Fall term, fourth year. To the young women a course



HORTICULTURAL HALL AND GREENHOUSE.

STUDENTS AT WORK IN THE GARDENS.

of daily lectures is given by the lady principal, upon the laws of life and health. The course extends over a period of 14 weeks, and covers questions pertaining to personal health and the health of the household, such as food, air, exercise, clothing, temperature of rooms, and care of sick room.

Veterinary Science.

The 12-weeks course of lectures to the young men, in the winter term of the fourth year, is adapted to wants of farmers and stockmen, and includes such topics as the following: Hygiene and nursing of sick and wounded stock; diseases of bone and their treatment; diseases of the circulation, respiratory and digestive systems, their causes, treatment, and prevention; surgical operations; difficult parturition; shoeing and lameness; veterinary dentistry; horse judging and examination for soundness; some contagious and infectious diseases — their nature and prevention; the principal medicines used in treating sick animals, and how to give them. Whenever practicable, operations are performed before the class, and students are requested to assist.

Extended Course.—This course is intended for students who desire to pursue the study further than the limited time of the regular course will allow. It will be made as practical as possible. In contagious and infectious diseases, a study will be made of the organisms which produce diseases of stock, the periods of incubation of the disease, symptoms, prevention, and treatment.

Winter Term.—Theory and practice of veterinary medicine; conformation with reference to particular requirements of animals; soundness, and law of warranty.

Advanced work is offered in the spring term in comparative anatomy and physiology, *materia medica*, and surgery.

The extended course must be preceded by the required work of the fourth year, and must be taken in the order given.

Means of Illustration.—A laboratory fitted with apparatus, instruments, and reagents, for the study and treatment of disease. An Azoux model of a horse, which is dissectible, showing nearly 1,000 anatomical structures, skeletons, charts, and a large collection of anatomical specimens, showing healthy and diseased structures. Valued at $2,000.

Chemistry.

The study of chemistry occupies 44 weeks. Fourteen weeks are first given to *Inorganic Chemistry*. In this the elementary principles of the science are studied, with special reference to familiarizing the student with the essential phenomena of chemical action. Combination by weight and by volume; formation of bases, acids, and salts, and the relations existing between them; systematic nomenclature and notation; the natural classification of the elements, based upon their properties — these, with careful study of the most important properties of the commoner elements, furnish the basis for the work.

The facts studied are illustrated whenever practicable by experiments on the lecture table. In addition to this, each student gives two hours weekly to personal repetition of such experiments as can be performed with simple apparatus. Preparation of the elementary gases and a number of compounds, with experiments illustrating their properties, neutralization of bases and acids, and experiments illustrating the formation and stability of salts, are examples of the kind of work done by the students. Remsen's Introduction to the Study of Chemistry is used as a text-book.

The course in *Organic Chemistry* extends over six weeks. This is taught by lectures, in which the object is less a presentation of systematic organic chemistry than a study of the occurrence, manufacture and uses of the more important organic compounds met with in everyday life. In so far as the time and subjects will permit, however, the chemical relations existing between the various classes of compounds, and their relations to inorganic compounds, are set forth as simply and distinctly as possible. The subject is taught by lectures accompanying Willard's Organic Compounds of Everyday Life as a text-book. The lectures are illustrated by experiments, but the students do no laboratory work in this connection.

The course which, for convenience, is designated *Analytical Chemistry* is not designed so much to perfect the student in analysis as to familiarize him with the properties, the resemblances, and differences of the compounds of the various bases and acids. It is a course in experimental chemistry in which the regular methods of identification and separation of substances are used as a basis for the work. Each student has his own worktable, with water, gas, reagents, etc., and works eight hours per week for 10 weeks. He is first given single salts of known composition, then simple known mixtures, and finally unknown substances, which may be soluble or insoluble, simple or complex.

In addition to the laboratory work, the student is required to study carefully the nature of the chemical reactions which take place. Besides the small handbook used as a guide in the laboratory, students are expected to consult the larger works of reference. Two hours weekly are spent in the lecture room, in which the teacher conducts a quiz upon the subject and explains any obscure points. Throughout the term, the student is required to express by equations the reactions observed in the laboratory. The aim of the course is to unify and amplify the student's knowledge of general chemistry.

Chemistry of Foods and Agricultural Chemistry.—During four weeks of the fall term of the third year, attention is given to the chemistry of milk, butter, cheese, common grains, vegetables, and fodder plants. During the spring term, the relations of chemistry to soils and growing crops are studied. Some of the subjects taken up are the breaking down of minerals and rocks into soils, erosion, transportation, and deposition; composition and classification of soils; the relations of plants to the constituents of the air—oxygen, nitrogen, water, carbon dioxide, ammonia; manures—their composition and use; green manuring; plowing; draining.

CHEMICAL LABORATORY.

CROSSCUP & WEST ENG. CO.

CHEMICAL LABORATORY, ANALYTICAL ROOM.

Extended Course.—For those students desiring to study chemistry further, either for itself or as an auxiliary to other branches, a course in *Advanced Inorganic Chemistry* is offered, extending through the fall and winter terms. This course is designed to increase the student's knowledge of the facts of chemistry, and to give breadth and strength to his grasp of their relations. Remsen's Inorganic Chemistry is used as a text-book, and special topics are treated in lectures. Carefully chosen laboratory work, designed to illustrate the principles of the science, forms an important part of this course. Following this, the spring term is given to *Organic Chemistry*, Remsen's Organic Chemistry being used as a text-book. The laboratory work done in this connection includes the preparation of a considerable number of organic compounds, and, if time permits, the quantitative separation of some of the more important proximate constituents of foods and fodders.

Quantitative Analysis may be taken up at any time, if the student's proficiency makes it advisable. It may be taken to any extent, from a partial course to the equivalent of two studies in the fifth year. After the necessary amount of preliminary training, the student may give special attention to any of the various lines of quantitative analysis, such as that of foods and fodders, soils and fertilizers, ores, water, gases, etc. The investigation of special chemical questions will be encouraged.

Means of Illustration.—Seven rooms, fitted with tables and apparatus for a class of 80 students in qualitative analysis, eight in quantitative analysis, including necessary facilities for assaying, and general illustrative apparatus. Value, exclusive of building, $5,000.

Mineralogy.

The common minerals are studied during six weeks of the winter term of the second year. One hour per day is given to recitations and to class-room study, and the same time to determination of minerals by their physical and blowpipe characters.

Means of Illustration.—A well-selected mineralogical collection representing the various forms, colors and structures of all but the rarest species. This is supplemented by a similarly good collection of rocks. Valued at $3,500.

Geology.

During the spring term of the fourth year a study is made of the igneous, atmospheric, aqueous and organic agents that have brought the earth to its present condition; the structure and arrangement of rocks; the order of succession in the strata of the earth's crust and in the life of the globe. Prominence is given to facts having an economic bearing, valuable mineral deposits in Kansas receiving special attention.

Means of Illustration.—Collections of specimens representing the principal geological formations; Kansas fossils and rocks, typical of the geological ages found in the state. Valued at $1,500.

Physics.

Elementary Physics.—Spring term, first year. This term's work is intended to give the students a general view of the subject, with such laws and principles as will be useful to them in scientific studies. Apparatus will be used and scientific investigation encouraged. Text-book, Carhart and Chute's Elementary Physics.

Advanced Physics.—Fall term and half of winter term, fourth year. This time is given to the experimental and text-book study of sound, heat, light, electricity, and magnetism. *Meteorology* will be treated in connection with the several subjects in physics, including a careful study of instruments and methods employed in taking meteorological observations. Text-book, Barker's Physics, advanced course.

EXTENDED COURSE.—Advanced work in physics is offered during the winter and spring terms. It must be preceded by the physics of the required course.

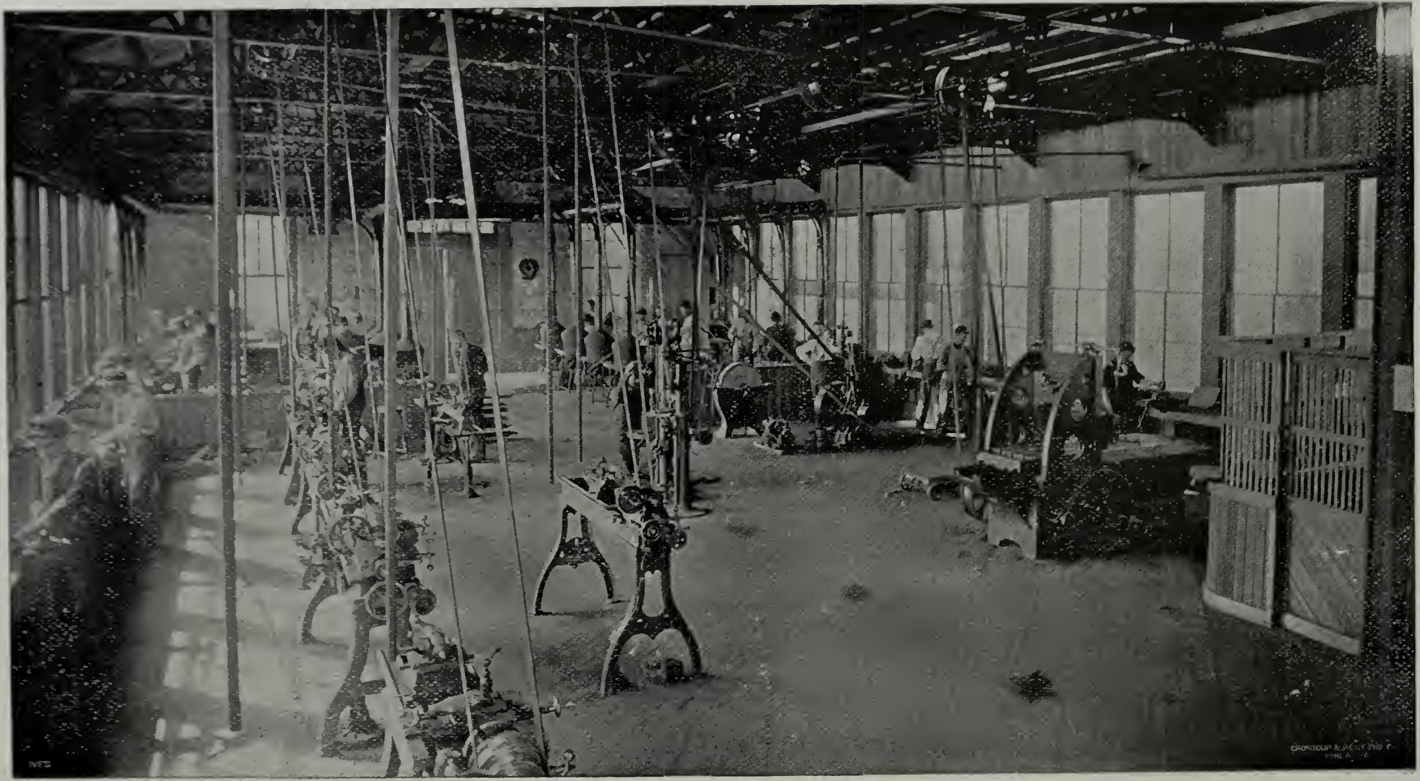
Means of Illustration.—Complete physical apparatus, for general instruction in physics, and meteorological instruments, including a self-recording anemometer. Among the apparatus for special work may be mentioned, Coulomb's torsion balance, Kohlrausche differential galvanometer with reading telescope, Deprez-Carpentier ammeter, Ayrton and Perry's voltmeter, Thomson's potential and current galvanometers, Carhart-Clark standard cell, standard legal ohm, Wheatstone's meter bridge, Edelmann dynamo. The value of the whole is $4,500. The distribution of power by electricity is illustrated at the College by a 40-horse-power generator and four motors, of 5, 8, 10 and 12 horse power.

Mechanics and Engineering.

Elementary Mechanics.—Winter term, third year. The laws of motion and force are treated and applied to falling bodies and other commonly observed phenomena. The subjects of central forces, friction, work, energy, complete the study under the head of dynamics. Under statics, the following subjects suggest the outline: Representation and composition and resolution of forces; analytical relations between forces in general; moments; conditions of equilibrium; center of gravity and stability. About two weeks are given to the study of the elementary machines, as the lever, screw, wedge, etc. Dana's Text-book of Elementary Mechanics is used.

Engineering.—Spring term, fourth year. No text-book adaptable to our general course is to be had, and the subject is presented by lectures. The object of the course is to present such subjects in elementary, mechanical and civil engineering as should be understood by every young man educated in the arts and the applications of science. The various motors used for transforming energy are discussed; the various forming operations which give useful forms to all materials are presented. A study of the materials of construction is introductory to an analysis of various structures, their forms, strength, and desirability. Applications of the principles of mechanics are frequently

IRON AND WOOD WORKSHOPS.



MACHINE SHOP.

made. Draughting is an essential feature of the work. Haswell's Engineer's Handbook is used by the class in connection with the lectures.

EXTENDED COURSE.—In the fall term the materials of engineering, their durability, strength, and manner of use, are studied, with alternate lessons in applied mechanics.

The applied mechanics will be a continuation of the study of mechanics, with its special application to problems in machine construction and general engineering. In the winter term in this course, a study of machine design, using Kline's Elements of Machine Design, alternates with work in theoretical hydraulics. The machine design involves a careful study of the current practice in designing such elements as fastenings of various kinds, bolts, rivets, keys, etc., of belting, gearing, bearings, frames, etc. In connection with the drawing department, a study of graphical statics and the design of various steam-engine valve gears is offered.

In the spring term, a study of heat and heat engines, with special attention to the steam engine, is made. An advanced class in steam-engine design will make complete drawings and a study of the various parts of a steam engine, the work alternating with a study of inventive design. This work attempts to strengthen the inventive faculty, by means of problems in which certain conditions are assumed and a device is evolved for obtaining the required result. A study of Flather's Measurement of Power will alternate with laboratory practice in engineering, such as duty trials of a 12-horse-power Atlas engine, a 50-horse-power Ball & Wood engine, steam pumps, indicator practice, boiler tests, standardizing of instruments, and such other work as the equipment will allow.

Woodwork and Ironwork.—Woodwork is required of all young men during one term of the first year. In the first term's work a definite, graded series of tasks is given in joining, work to dimensions, and simple problems in construction, with the proper use and care of common bench tools, through which each student is advanced according to ability. Practice is given later in general woodwork, carpentry, cabinet making, turning, and pattern making; and the advanced students may have work suited to their chosen line, with special problems of construction, and special training in the use and care of fine tools. All work during industrial hours is laid out by the superintendent, and belongs to the shop, except that fourth-year students are allowed to work from drawings of their own upon articles for their own use and profit. All students, when permitted, have the use of the shop outside of the practice hours for work of their own, under direction of the superintendent.

A general course in ironwork includes graded work in blacksmithing, the management of the forge and hammer, drawing out, welding, forming, etc.; graded work in founding, covering, bench and floor molding in iron and brass; also graded work in machine-shop practice, including bench and machine tool work, filing, chipping, laying out work, boring, turning and planing the metals.

Means of Illustration.—Carpenter shop, with 220 separate kits of tools, and benches for 45 students in each class; lathes, planer, circular saws, friezer, mortising machine, grinder, and tool room containing all kinds of woodworking tools for general use. Shops for ironwork contain 16 blacksmith forges; brass foundry, with 12 benches and 50-pound furnace; iron foundry, with two-ton cupola and good assortment of flasks; machine shop, equipped for 30 students, with hand tools, six screw-cutting lathes, one speed lathe, planer, shaper, No. 2 Brown and Sharpe universal milling machine, Walker universal grinder, drills, bolt cutter, and tool room of fine tools. The heating and power plant attached form part of the illustrative apparatus, containing five boilers, pumps, one 50-horse-power Ball & Wood engine, one 10-horse-power Atlas engine, 40-horse-power Belknap generator, and other illustrative apparatus. Wood shop run by a 12-horse-power motor; iron shop, by an 8-horse-power. Value of equipment, $19,000.

Mathematics.

Algebra.—The first year is given to the study of algebra. In the first term, arithmetical processes are briefly reviewed and generalized by the use of negative numbers. The student is made familiar with algebraic notation, the primary processes, factoring, fractions, and the simple equation. In the second term, the equation in its various forms and applications, and the theory of exponents, are made subjects for study. The third term is given to ratio, proportion, series, logarithms, and such other topics as are essential to success in every course in mathematics. Text-book, Wells's Higher Algebra.

Geometry.—In geometrical drawing of the first year, the student has already become familiar with geometrical forms, and the construction of figures representing them. Plane geometry is studied during the fall term of the second year. Half the winter term is then given to solid and spherical geometry. Throughout the course, original demonstrations, and the solution of practical problems involving the theorems demonstrated, are required of the class. Text-book, Wentworth's New Plane and Solid Geometry.

Trigonometry and Surveying.—Fall term, third year. All the essential principles of plane trigonometry are carefully developed and thoroughly mastered. A short treatment of spherical trigonometry follows. Surveying includes theory, adjustment and use of instruments, platting, determination of areas, dividing land, United States government surveys, triangulation, leveling, topographical surveying, and railroad surveying. Field practice with compass, transit, plane table and Y level is required. A topographical map, the data for which are gathered during the fall term, is drawn by each student during the winter term. Text-book, Wentworth's Trigonometry and Surveying.

Extended Course.—This department offers three terms of elective work in the pure mathematics. Fall term, analytic geometry; winter term, differential calculus; spring term, integral calculus. The analytic geometry is required in preparation for the elective work in engineering, graphics, and physics, and the calculus is recommended.

Means of Illustration.—Transits, plane table, compasses, levels, chains, models, etc. Valued at $1,400.

Bookkeeping and Commercial Law.

First Year.—Six weeks of winter term. Beginning with a simple cash account, bookkeeping is developed through all the essential principles. Considerable time is given to those forms best adapted to farm and business life. Each student provides a full set of blanks, and keeps a regular set of books, in which accuracy of calculation and posting and neatness of execution are just as essential as correct understanding of the principles. Text-book, Pierce's College Manual. In connection with the work in bookkeeping, a practical course of 12 lectures in commercial law is given, including contracts, farm rights, negotiable paper, sales, real estate, partnership, bailment, common carriers, and business forms.

Drawing and Descriptive Geometry.

Free-hand Drawing and Sketching.—The course in free-hand drawing comprises 42 lessons in surface designing and 24 lessons in sketching from the object. The surface designing is taught in the fall term of the first year. The student begins with forms involving the straight line and the arc. He is led to note the effects of geometrical arrangement, repetition, alternation, symmetry, proportion, harmony, and contrast. Later, the conventional ornament is taken up, and more subtle curvatures and complex forms are introduced. Toward the close of the term, natural forms and historic ornament in the flat are studied. The work in sketching is connected with the study of linear perspective in the spring term of the third year. The models used are geometrical solids and objects of utility and beauty, whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow, and the reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish. Walters's drawing books are used as text-books.

Graphics.—The course in graphics comprises six weeks of geometrical drawing; six weeks of orthographic and axonometric projection, including plane intersections; 10 weeks of descriptive geometry, including the study of plane and space curves and the principles of shades and shadows; and 16 lessons in linear perspective. The geometrical drawing is taught in the winter of the first year, and consists of the construction of perpendiculars, parallels, angles, and polygons, the circle and its secant lines, the ovoid, the oval, and the spiral, various geometrical designs and elementary architectural forms, the use of drawing board and T square, and the conventional representation of building materials. Projective drawing and descriptive geometry are taught in the second year, after the student has completed algebra and geometry; linear perspective is taught in the spring term of the third year, in connection and alternating with work in sketching from object. The College furnishes drawing board, T square, triangles and water colors for the graphic work done at the College, but all tools, including drawing board, T square, triangles, compasses, and protractor, for home use, must be furnished by the student. Text-books: Walters's Elementary Graphics, books I to IV.

Technical Drawing.—During the winter term of the third year, each student is required to draw, ink and letter a map delineating the surveys made by the trigonometry class. In the fall term of the fourth year, two afternoons per week are given to dimension sketching, draughting, designing, and rendering in ink and water color, with the object of acquainting the student with the practical methods followed in the workshop, the draughting room, and the studio. Accuracy of measurement and neatness of execution are required in all work. Every student is instructed in the manipulation of the blue and black printing processes.

Some of the graphic work of the different classes and special students is retained by the department for exhibition during commencement.

Extended Course.—Work for students who intend to follow pursuits in any of the various lines of designing, building, architecture and decoration is offered, as follows: (*a*) Advanced *Descriptive Geometry*, winter term, consisting chiefly of a study of double-curved or warped surfaces and their sections and intersections; (*b*) *Historic Ornament*, spring term, a study of representative historic façades, decorations, and details; (*c*) *Heating and Ventilation*, fall term, a critical comparison of the various existing systems; (*d*) *Graphic Statics*, winter term, with applications in the construction of arches, trusses, and machines; (*e*) *Architectural Composition*, spring term, involving the preparation of drawings and specifications for architectural structures. Students intending to take this course should, in addition, study analytical geometry, in the fall term of the fourth year, with the department of mathematics; materials of construction, in the fall term of the fifth year, with the department of engineering, and landscape gardening, in the spring term of the fifth year, with the department of horticulture.

Means of Illustration.—Models, plaster casts, patterns, charts, easels, and implements. One of the class rooms is provided with top light, and furnished with 24 new Dietzgen patent drawing tables. An adjacent room is fitted up with running water, coating table, ruby light, etc., for blue and black printing. Valued at $2,000.

English Language and Literature.

Analysis.—Fall term, first year. This includes the origin and growth of the language, the history of its grammatical forms, the analysis of sentence making, and the discussion of idioms and difficult constructions, together with such contraction, transposition and transformation of sentences as will aid in securing variety of expression. No text-book.

Structure.—Winter term, first year. One term's work is given to careful study of words and their elements—roots, prefixes, and suffixes. The most fruitful primitives from Saxon, Latin and Greek are learned, and also the laws governing the formation of derivatives. Attention is given to the history and changes of words, and daily exercises teach careful discrimination in their use. Text-book, Swinton's Word Analysis.

Composition.—Spring term, first year. One term is given to the study and practice of composition, including the elements of rhetoric. Text-book, Genung's Outlines of Rhetoric.

Rhetoric.—Spring term, third year. This is the study of higher rhetoric, including discussions of the fundamental processes of composition and the essential elements of the different forms of discourse. Selections from good authors are studied for the application of principles and the outlines of criticism. Text-book, Genung's Practical Rhetoric.

Literature.—Fall term, fourth year. This includes the history and development of English literature, with illustrations from the best authors. Students are led to appreciate the power of our mother tongue, and at the same time to gain some acquaintance with the best thought of the world. Text-book, Pancoast's English Literature.

In the spring term of the fourth year, an additional course is provided for the young women of the class. This consists of a study of nineteenth-century authors, with the reading and discussion of standard works. Hodgkin's Leaflets are used as a guide.

Rhetoricals.—This course is designed to make clear writers and forcible speakers; professional elocution is not contemplated. Given sufficient theory, continuous practice is deemed indispensable. The student is, therefore, required to take rhetoricals weekly throughout the course.

First Year. Declamation; letter and essay writing, paying especial attention to chirography, punctuation, capitalization, paragraphing, etc.; with criticism by the class and the instructor.

Second Year. Written practice on the work of the first year; essays; letters; paraphrases; resolutions; speeches; preparation of briefs for debate; delivery of the same; declamation; gesticulation.

Third Year. Outlining; theme writing; practice on fundamental processes, as given by Genung; essays; book reviews; character studies; critiques. Each member of the third-year class delivers publicly one declamation and an original oration, being drilled on the delivery of the same, in private rehearsals, by the instructor. Text-book, Genung's Rhetoric.

Fourth Year. Topics are assigned that give practice in all forms of writing and speaking. From time to time the class is organized as a farmers' institute, a teachers institute, a political or commercial convention, and appropriate duties apportioned. In addition to the class work, two public orations and a graduating thesis are required.

History and Political Science.

General History.—Fall term, third year. The objects of the course are the fixing of the chief events in the memory, the training of the reason, and the cultivation of the taste for historical reading. Outlines are made and memorized, original sources are examined, and reference reading required. Text-books, Myers's General History; Original Sources of European History.

Civil Government and Political History.—Winter term, third year. Training for citizenship is kept constantly in view. Investigation and discussion of all disputed points are encouraged. Text-books, Hinsdale's American Government, Johnston's American Politics.

History of Science and Industry.—Six weeks of the winter term, fourth year. The development of science is traced in a course of lectures. Cunningham's Outlines of English Industrial History is used as the basis for the study of the history of industry, but considerable additional matter is presented in lectures and reports.

EXTENDED COURSE—*Comparative Politics.*—Fall term. The history and structure of the English, French, German and United States governments are compared and discussed. Text-book, Wilson's The State.

Comparative Municipal Government.—Winter term. The structure and special problems of some of the chief cities of Europe and America furnish themes for lectures and reports.

Constitutional Law.—Spring term. The principles that have been developed by the supreme court in its interpretation of the constitution are examined and discussed. Reports on certain important cases are required. Text-book, Cooley's Principles of Constitutional Law.

Political Economy.

Public Lecture Course.—Thirteen lectures are delivered to the whole body of students, on certain Friday afternoons of the fall and winter terms. These lectures treat the subject consecutively, commencing with the primary concepts of the science. The principles maintained by the advocates of land nationalization, public control of public utilities, and the reform of the financial or monetary system, are fairly stated and candidly examined, with a view of leading the student to grasp the principles involved in the science of production and distribution without bias or prejudice.

Course in Elementary Study.—Spring term, third year. Pains are taken to compare conflicting views and point out sources of information on all sides of vexed questions. Each student is required to present at some time during the term an original paper on some topic assigned by the instructor. Text-book, Andrew's Institutes of Economics.

This course, together with the preceding, is designed to serve as an introduction to the

EXTENDED COURSE.—The following six elective courses will be offered:

Fall term, "*Distribution*," and "*Taxation, Tariff, and Railway Transportation*;" winter term, "*Money*" and "*Banking*;" spring term, "*Principles of Sociology*" and "*Socialism and Social Reforms*." The work will consist of lectures, class-room discussions, written work, occasional use of texts, and the constant use of the library. The attempt will be made throughout to enable the student to handle the literature of the science, to examine the subject from different points of view, and to form intelligent judgments regarding economic questions. While it is desirable that the student seeking proficiency in political economy shall take as many courses as practicable, the courses will not be made so closely dependent upon each other that failure to take one will exclude from another.

The work in history and political science will be found helpful to the student in political economy.

Philosophy and Logic.

Psychology.—Winter term, fourth year. A short course in psychology gives the general principles of intellectual and moral philosophy. Perception, understanding, memory, imagination, thought, feeling and volition are topics of explanation and analysis. Theories of right and wrong and correct principles of action are made the means of a clear understanding of the nature of government in various forms, with special attention to individual rights and duties. Topics are assigned for individual work, to be presented in thesis form at the close of the term. Text-book, Dewey's Psychology.

Logic.—Spring term, fourth year. The art of reasoning correctly is aided by a study of systematic logic, both deductive and inductive. Special prominence is given to methods for exact observation and experiment and correct principles of classification. The previous researches and experience of the students are made to illustrate these principles. Text-book, Jevons-Hill, Elements of Logic.

Household Economy and Sewing.

Household Economy.—A series of lectures to young women of the second year continues through a term of 12 weeks. These cover the subject of marketing, the chemistry of cooking, order, neatness and beauty in housekeeping, and comfort of a family.

Cooking.—During the winter term, the young women who have lectures on household economy are required to cook one hour each day. They are taught various methods of making the substantial articles of food, as well as allowed to spend some time on the dainty dishes. During the term, they have practice in waiting on the table and in serving guests, thus putting the lectures into immediate practice.

During the fall term, any students who have passed the study of household economy may take cooking as an industrial, in which canning fruits, making preserves, jellies, pickles, mince-meat, desserts, cake and fancy breads form the principal part of the work.

The class spends one hour each day in the kitchen laboratory, and cooking is done by each student.

Dairying.— During the spring term, daily instruction and practice in domestic dairying are given the young women of the second year by the instructor in household economy. Here the regular daily work is supplemented by a short course of lectures, intended to explain the best practice in the arts of butter and cheese making, and to give the reasons therefor. The following topics cover, in the main, the instruction given the class: Influences affecting the quality and quantity of milk; butter making; creameries; "deep" and "shallow" setting systems; packing and preserving butter; the household and factory systems of cheese making.

Sewing.— One term of sewing is required before the completion of the first year of study. During this term the work is carefully laid out by the Superintendent in a series of lessons, graded to the capabilities of each student. To more advanced students all ordinary forms of sewing with needle or machine are taught, and any student may furnish material, and work for her own advantage under direction of the Superintendent. Cutting and fitting by a straight-line system are taught, and the systems are furnished at wholesale rates. Fancy needlework and knitting may be taken at certain stages of the course.

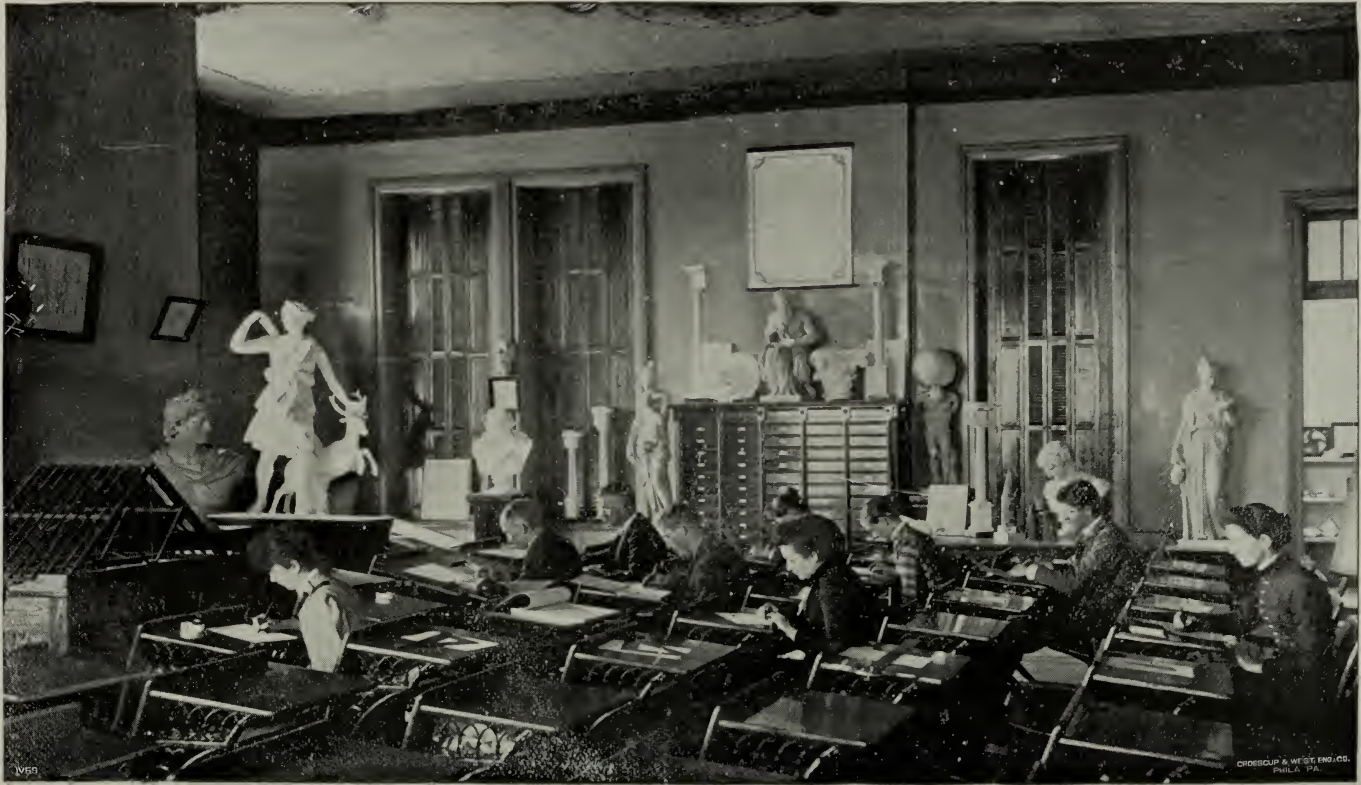
Extended Course.—The work on breads, meats and salads (winter term) covers the study of flours, yeasts, and baking powders, as well as knowledge of the making of many kinds of bread. The work on meats includes a study of meats in the shop or on the block, the best ways to cook certain cuts of meat, and special work on the use of left-over meats for the making of savory and nourishing dishes. The work in salads gives practice in making those of meats, vegetables, eggs, and fruits.

Cake, pastry and desserts (spring term) covers the principles governing the making of the various kinds of cake and their uses, in preparing meals, and entertainment for friends. Pastry covers puddings and sauces, pies, and puff paste; the use of various flours in these foods and the manipulation of materials. Desserts includes the uses of ice creams, ices, sherbets, and frappès, and the making, packing and serving of these dishes.

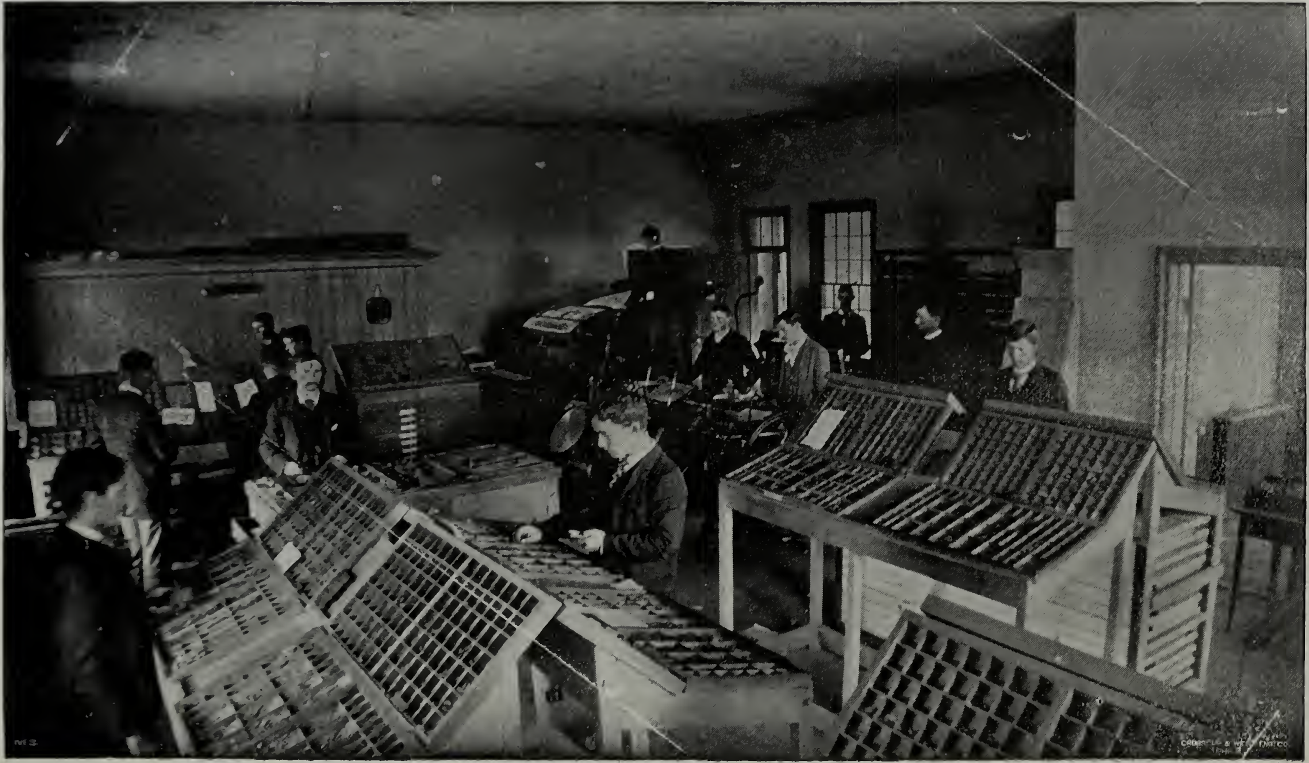
Regular lessons are given on the values of the foods under consideration and the most convenient method of serving them. Practice is afforded in the kitchen laboratory. Deftness of manipulation as well as knowledge of combinations must be attained before this advanced course can be taken. For certain portions of the work, special chemistry, botany and entomology are required.

Means of Illustration.—Kitchen laboratory, with ranges, cooking utensils, dining-room furnishings, dairy furniture. Valued at $900.

Sewing rooms, with eight machines, models, patterns, and cases. Worth $700.



DEPARTMENT OF INDUSTRIAL ART.



PRINTING DEPARTMENT.

Music.

Vocal Music.—Instruction is furnished free of charge, under the direction of the Faculty. Classes meet on Wednesdays for advanced pupils, and for beginners on Tuesdays and Thursdays, at 1:30 P. M. This study is taken up at the choice of the student, but regular attendance is required as at the other classes. The advanced class shares in the music of public exercises during commencement week. Text-books, Scansion and Song, Brown's Prismatic Charts, Hatton, Concone, Marchesi, with selections from the opera and oratorio.

Instrumental Music.—Instruction upon the piano, organ, mandolin, guitar, and the more important orchestral and band instruments, is given free to students in the regular courses, under the following restrictions:

It may be taken as an industrial by ladies only, after the required industrials of the first year, and after passing an examination equivalent to one term in vocal music, in which case one hour's daily practice at the College is required.

It may be assigned as an extra at any time, when a student does well in the general course of study.

Class organization shall be wholly under control of the professor in charge. Students in the music department shall be subject to the call of the professor for music connected with College exercises.

Students who are sufficiently advanced to join the College orchestra, which has its rehearsals on Wednesday, at 2:30 P. M., or the College cadet band, which practices in connection with military drill, may become members by assignment.

The College pianos and organs are used for daily practice; the other instruments must be provided by the pupils using them. A full course, extending over four years, includes harmony and composition; but students may take lessons for a single term if they choose. Text-books, standard instructors, with suitable studies and selections.

Means of Illustration.— Music rooms, with five pianos, four organs, and other instruments, valued at $1,800, and nine charts, valued at $1,800.

Printing.

Two courses are pursued in this art. In one the student is taught the use of the implements or tools used in typography; composition and imposition; correcting proof; technical terms; presses and their workings; and the general duties of a first-class workman. The other course of lessons embraces instruction in spelling, capitalization, syllabication, punctuation, proof reading, and such other work as will make the student accurate and expert. Wilson's Punctuation is the text-book; but much of the instruction is oral — such as grows out of the everyday experience of the office.

Admirable drill is furnished by the *Industrialist* to all, but especially to those who take the full course. The printing which the departments of the

College require gives to the advanced student a fair knowledge of the principles and practice of job work.

Means of Illustration.—Printing office, with 30 pairs of cases; large fonts of 6-point, 8-point, 10-point and 11-point Roman type; a good assortment of job type and brass rule; a Babcock cylinder press, with electric motor, a New Liberty quarto-medium job press, a Gordon eighth-medium job press; a mitering machine; a rule-curving machine; and a paper cutter. Value of equipment, $4,800.

Military Training.

Theoretical.—A course of lectures is given twice a week during half of the winter term and all of the spring term of second year. These are designed to show how an army is organized, equipped, and supplied; to explain some of the minor operations of war; to show the organization of the militia under the militia law of this state. Instruction is afforded to such as desire it in other military subjects.

Practical.—Drills are required from four to five times a week in fall and spring terms. In the winter term, drills are arranged to occupy time during the class hours not otherwise provided for. Special attention is given to "setting up," or physical development.

The practical course in infantry embraces small-arm target practice, and, as far as possible, all the movements prescribed by the "Drill Regulations of the United States Army" that are applicable to a battalion. Instruction in artillery includes, as far as practicable, such portions of the United States drill regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, and firing blank cartridges.

The College battalion is divided into companies, which are officered by students appointed each term by the professor in charge, with the approval of the President.

Arms and accouterments are furnished by the United States government, the students being required to keep such as they use in proper condition. Uniforms for use in drill are furnished by the College.

Means of Illustration.—Armory, containing 200 stands of arms (breechloading cadet rifles, caliber .45), with accouterments; two three-inch rifled guns; also swords, uniforms, etc. Value, exclusive of arms, $1,700.

General Information.

EXAMINATIONS.

Examinations for admission are held at the beginning of each term, as laid down in the calendar of the College year. Applicants entering at any other time during the term have special examinations. These examinations are chiefly written, and a standard of 70 per cent. is required to pass any study.

Examinations in the course are held as arranged by the Faculty. The results of these examinations are marked on a scale of 100, and combined with the average of the preceding daily exercise upon the same scale into a grade for report to the Secretary. But any student not present at three-fourths, at least, of the class exercises, receives, at such times as the teacher may name, a more extensive examination than the general one; and this examination alone decides the grade. Unexcused absences are taken into account in calculating grades.

Averages of grades in the register are made by giving the final term grade a value of two-thirds and previous grades a value of one-third. After each term examination during the first year of attendance, a report of advancement is made to parents; and any student, upon leaving College at the close of a term, may receive a certificate of standing.

The final grade and the term average must be at least 70 for passing any study; and any student who fails to pass in two studies of the course may either drop back a year or withdraw from College.

After completing the studies of the first year, students are allowed special examinations only upon recommendation of the professor in charge, and by permission of the Faculty. Permission for examination in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive.

Candidates for graduation must make good all deficiencies before entering upon the work of the spring term of the fourth year.

Students are not catalogued in the third-year class unless deficiencies of previous years are provided for.

Students deficient in entrance studies must make good such deficiencies before entering upon the work of the second year.

TERMS OF ADMISSION.

Applicants for admission at the beginning of the College year must be at least 14 years of age, and able to pass a satisfactory examination in reading, spelling, writing, arithmetic, geography, English grammar, and United States history. Specimen questions will be furnished on application. Those applying later in the year must show sufficient advancement to enter the classes already in progress. Every effort should be made to begin with the first day of a term, in order to advance with the classes from the first.

The following diplomas and certificates will be received in lieu of entrance examinations:

1st. Diplomas received on the completion of a county course of study which has been approved by the Faculty, when properly signed by the county superintendent.

2d. Certificates of passing the grammar grade in any city school with a course of study approved by the Faculty, when properly signed by the city superintendent.

3d. Kansas teachers' certificates issued by the county board of examiners, showing that the above-named studies have been passed with a grade of at least 70 per cent.

The Faculty have approved the courses of study adopted by the following counties and cities; others may be submitted for approval at any time:

COUNTIES.

Allen,
Anderson,
Barber,
Brown,
Bourbon,
Butler,
Chase,
Cherokee,
Clay,
Cloud,
Cowley,
Dickinson,
Doniphan,
Douglas,
Elk,
Ellis,
Ford,
Franklin,
Geary,
Greenwood,
Harper,
Harvey,
Jackson,
Jefferson,
Jewell,
Johnson,
Kingman,
Labette,
Leavenworth,
Linn,
Lyon,
Marshall,
Marion,
McPherson,
Miami,
Mitchell,
Montgomery,
Morris,
Nemaha,
Neosho,
Ness,
Osage,
Osborne,
Ottawa,
Pottawatomie,
Republic,
Reno,
Rice,
Riley,
Rooks,
Rush,
Russell,
Saline,
Sedgwick,
Shawnee,
Sumner,
Wabaunsee,
Washington,
Wilson,
Woodson,
Wyandotte.

CITIES.

Abilene,
Alma,
Anthony,
Argentine,
Arkansas City,
Atchison,
Augusta,
Baldwin,
Belleville,
Beloit,
Burlingame,
Burlington,
Caldwell,
Chanute,
Cherry Vale,
Chetopa,
Clay Centre,
Clifton,
Coffeyville,
Columbus,
Concordia,
Council Grove,
Dodge City,
El Dorado,
Ellsworth,
Emporia,
Eureka,
Fort Scott,
Fredonia,
Garden City,
Garnett,
Gaylord,
Girard,
Great Bend,
Hiawatha,
Holton,
Horton,
Humboldt,
Hutchinson,
Independence,
Iola,
Junction City,
Kanopolis,
Kansas City,
Kingman,
Larned,
Lawrence,
Leavenworth,
Lincoln,
Lyons,
Manhattan,
Mankato,
Marion,
McPherson,
Minneapolis,
Neodesha,
Newton,
Olathe,
Osage City,
Osborne,
Oswego,
Ottawa,
Paola,
Parsons,
Pittsburg,
Pomona,
Pratt,
Russell,
Salina,
Scranton,
Seneca,
Solomon City,
St. Mary's,
Topeka,
Valley Falls,
Wamego,
Washington,
Waverly,
Wellington,
Winfield,
Wichita.

Applicants over 18 years of age, who, for lack of advantages, are unable to pass the full examination, may be received on special conditions.

Applicants for advanced standing in the course must pass examination in all the previous studies of the class to be entered; but, if they have pursued such studies in other institutions of similar rank, they may receive credit for their standing in those institutions, upon presenting a certificate from the proper officer, showing that their course has been equivalent to that given here.

GENERAL DUTIES AND PRIVILEGES.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character, by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week day except Saturdays, and no student may be absent without excuse.

Students enrolled in any term cannot honorably leave the College before the close of the term, unless excused beforehand by the Faculty. A full and permanent record of attendance and scholarship shows to each student his standing in the College.

Chapel exercises occupy 15 minutes before the meeting of classes each morning, and unnecessary absence from them is noted. On Sunday no services are held in the chapel, but students are urgently advised to attend the different churches of the city.

Every Friday, at 1:40 P.M., the whole body of students gathers for a public lecture or for rhetorical exercises of the third- and fourth-year classes.

Systematic training in gymnastic and calisthenic exercises is provided for both young men and young women, under teachers appointed by the College.

There are four prosperous literary societies, which meet weekly, in rooms set apart for their use. The *Alpha Beta*, open to both sexes, and the *Ionian*, for ladies, meet Friday afternoon. The *Webster* and the *Hamilton* admit to membership gentlemen only, and meet on Saturday evening.

The Scientific Club, composed of members of the Faculty and students, meets in the chemical laboratory on the second and fourth Friday evenings of each month.

Branches of the College Y. M. C. A. and Y. W. C. A. hold weekly meetings at the College, on Sunday afternoon.

Once in each term the College Hall is opened for a social gathering of Faculty and students, in which music, literary exercises and friendly greeting find place.

Public lectures by prominent men of the state are provided from time to time, as opportunity offers. All are free.

LABOR AND EARNINGS.

Every encouragement is given to habits of daily manual labor during the College course. Only one hour daily practice in the industrial departments is required; but students are encouraged to make use of other opportunities for adding to their ability and means.

All labor at the College is under the direction of the superintendents of the departments, and offers opportunities for increasing skill and efficiency. In regular weekly statements, the students are required to observe business forms and principles, showing from their daily account when and where the work was performed.

The shops and offices are opened afternoons and Saturdays for the accommodation of skilled students in work for their own advantage. Everywhere the student who works wins respect; and it is a matter of pride to earn one's way as far as possible.

The labor of the students in the industrial departments is principally a part of their education, and it is not paid for unless the student is employed upon work for the profit of the College. Students are so employed upon the farm, in the gardens or the shops, and about the buildings. The labor is paid for at rates varying with services rendered, from 8 to 10 cents an hour. The superintendents strive to adjust their work to the necessities of students and give them the preference in all tasks suitable for their employment. So far as practicable, the work of the shops and offices is turned to account for their benefit; and the increasing extent of the grounds and sample gardens brings more of such labor. The monthly pay roll for the past year ranges from $250 to $400.

Many students obtain work in the city or upon neighboring farms, and so pay part of their expenses. In these ways a few students are able to earn their way through College. The amount so earned will vary according to the tact and zeal of the student. The majority must expect to provide by earnings outside of term time, or from other sources, for the larger part of their expenses. The long summer vacation of three months offers opportunity for farm or other remunerative labor; and no one need despair of gaining an education if he has the ability to use his chances well.

EXPENSES.

Tuition is free, and no fee for incidental or contingent expenses is charged.

The cost of text-books at the book stores is, for the first year, about $9; for the second year, about $10; for the third year, about $14, and for the fourth year, about $16.

The expenses for apparatus and tools to each student during the course are as follows: Drawing, $4.05; microscope for botany and entomology, $1.50; case, pins, etc., for entomology, $2.25; herbarium, $1.50. The total expense for these articles during the four years is less than $10.

Board and washing are not furnished by the College. Board, with furnished room, can be procured in private families at from $2.50 to $3.50 per week, or table board in student clubs from $1.50 to $2.25 per week. Some students board themselves at even less cost; and rooms for the purpose can be obtained at a rent of from $1 to $3.50 a month. Washing costs from 50 cents to $1 a dozen pieces.

Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 a year. No institution in the state furnishes an education at less cost to the student.

NAMES AND PRICES OF TEXT-BOOKS.

First Year.

Fall Term.—Wells's Higher Algebra, $1.50; Bastin's Elements of Botany, $1.25; Hitchcock's Key to Genera of Manhattan Plants, 50 cents; Walters's Free-hand Drawing, 25 cents; Sickles's Exercises in Woodworking, $1.

Winter Term.—Wells's Higher Algebra; Genung's Outlines of Rhetoric, $1.10; Pierce's College Manual of Bookkeeping, $1; Walter's Elementary Graphics, book I, 75 cents.

Spring Term.—Wells's Higher Algebra; Swinton's Word Analysis, 40 cents; Carhart and Chute's Elementary Physics, $1.35.

Second Year.

Fall Term.—Wentworth's New Plane and Solid Geometry, $1.35; Remsen's Introduction to the Study of Chemistry, $1.35.

Winter Term.—Wentworth's New Plane and Solid Geometry; Walters's Elementary Graphics, book II, 75 cents; Willard's Organic Compounds of Every-day Life, $1.75.

Spring Term.—Walters's Elementary Graphics, book III, $1.50; Failyer and Willard's Qualitative Analysis, 75 cents; Comstock's Manual for the Study of Insects, abridged, $3.

Third Year.

Fall Term.—Wentworth's Plane and Spherical Trigonometry and Surveying, $1.40; Myers's General History, $1.65; Original Sources of European History, 20 cents; Martin's Human Body, $1.40.

Winter Term.—Dana's Elementary Mechanics, $1.50; Hinsdale's American Government, $1.50; Johnston's American Politics, 90 cents; Orton's Zoölogy, $1.80.

Spring Term.—Andrews's Institutes of Economics, $1.40; Genung's Practical Rhetoric, $1.25; Walters's Elementary Graphics, book IV, $1.50.

Fourth Year.

Fall Term.—Barker's Physics, $3.50; Pancoast's English Literature, $1.50.

Winter Term.—Barker's Physics; Cunningham's Outlines of English Industrial History, $1.60; Dewey's Psychology, $1.25; Bastin's College Botany, $2.50; Hitchcock's Woody Plants of Manhattan, 20 cents.

Spring Term.—Jevons-Hill's Logic, $1.20; Haswell's Engineer's Handbook, $3; Le Conte's Compend of Geology, $1.25; Hodgkin's Literature Leaflets, 30 cents.

Music Department.

Instrumental, for standard text-books and studies, from $1 to $3 per term. Vocal, from 60 cents to $2 per term.

BUSINESS DIRECTIONS.

General information concerning the College and its work, studies, examinations, grades, boarding places, etc., may be obtained from the President or the Secretary.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid from the office of the Treasurer.

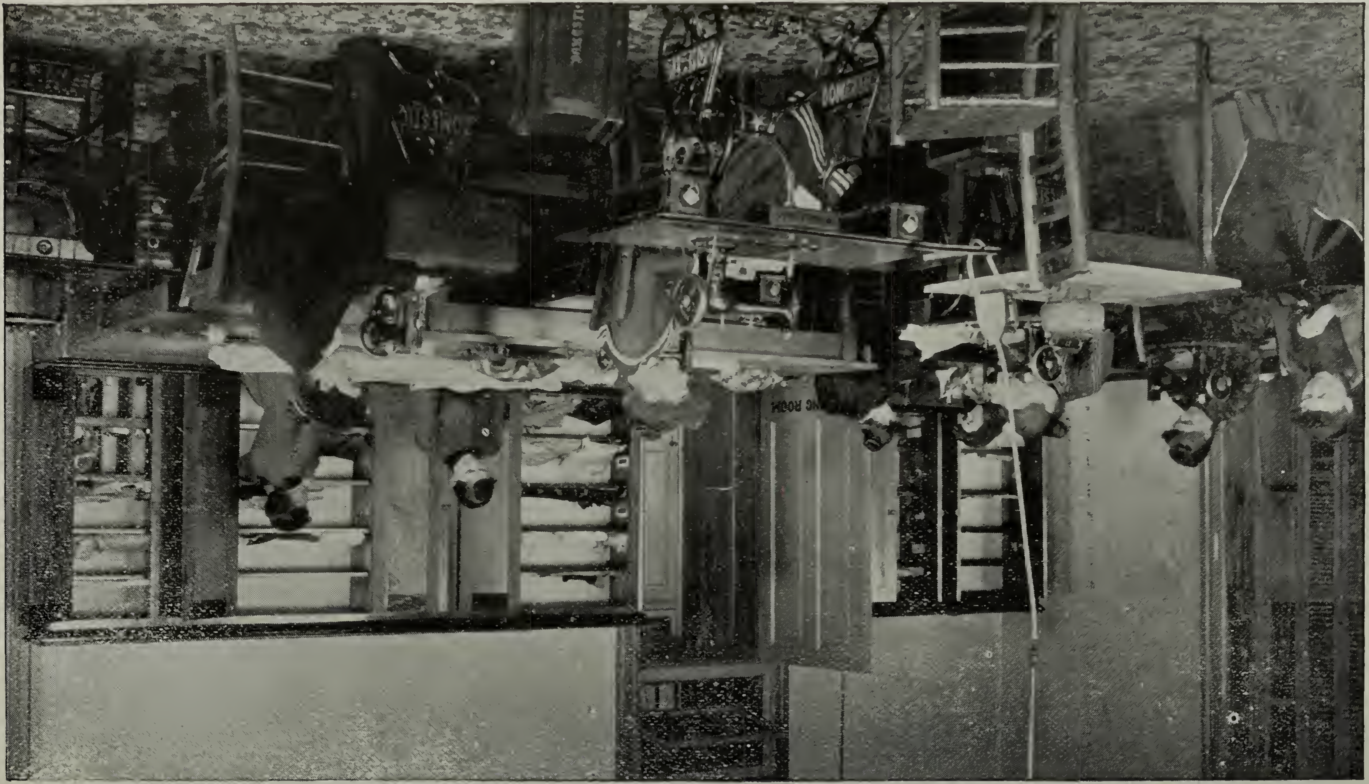
All payments of principal and interest on account of bonds or land contracts must be made to the state treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. Geo. T. Fairchild, managing editor. Subscriptions are received by Supt. J. S. C. Thompson.

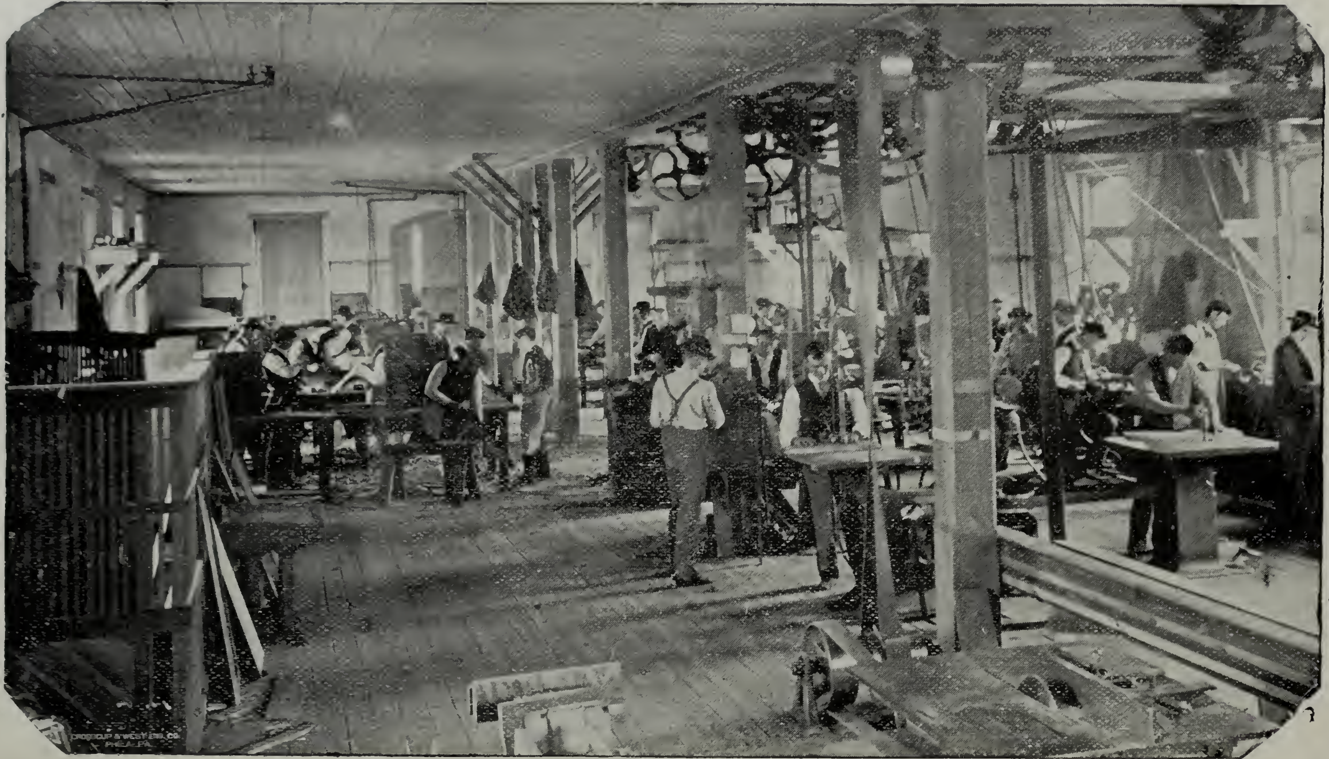
Donations for the library should be sent to the Librarian; donations for the museum, to the chairman of the Committee on Museums.

Applications for farmers' institutes should be addressed, as early in the season as possible, to the President.

The Experiment Station should be addressed through the Secretary of the Council.



SEWING DEPARTMENT.



CARPENTER SHOP.

Graduates.

[This list is made from the best data obtainable. A favor will be conferred by notifying the College Secretary of any errors or changes.]

1867.

HENRY L. DENISON, A. M., Denver, Colo. United States court reporter.
BELLE M. HAINES *Pond*, A. M., Topeka, Kas. Housewife.
EMMA L. HAINES *Bowen*, A. M., Manhattan, Kas. Housewife.
JOHN J. POINTS, A. M., Omaha, Neb. Lawyer.
MARTHA A. WHITE *Abbott*, A. M., Chicago, Ill. Housewife.

1871.

EMILY M. CAMPBELL *Robinson*, A. B. Died in 1877.
ELLA F. DENISON *Whedon*, A. B., Lincoln, Neb. Housewife.
LUELLA M. HOUSTON, A. B., Concordia, Kas. Milliner and dressmaker.
CHARLES O. WHEDON, B. Sc., Lincoln, Neb. Lawyer.
KATE E. WHITE *Turley*, A. B., Chicago, Ill. Housewife.

1872.

THEOPHANIA M. HAINES *Huntington*, A. B. Died in 1880.
ALBERT TODD, A. M., Fort Hamilton, N. Y. Lieutenant First U. S. artillery.
S. WENDELL WILLISTON, A. M., M. D., Lawrence, Kas. Professor of paleontology and director of the geological survey, State University.

1873.

ELIZA Z. DAVIS *Stringfield*, A. B., Pomona, Cal. Housewife.
SAM KIMBLE, A. B., Manhattan, Kas. Lawyer.

1874.

HARRY A. BROUS, A. M., M. D., Philadelphia, Pa. Physician.
EDGAR F. CLARK, A. B., New Whatcom, Wash. Lawyer.
JOHN E. DAVIS, B. Sc., D. D. S., Oakland, Cal. Dentist.
WILLIAM D. GILBERT, A. B., Atchison, Kas. Lawyer.
A. JUDSON WHITE, A. B., Chicago, Ill. Minister.

1875.

REUBEN E. LOFINCK, B. Sc., Manhattan, Kas. Merchant.
ALICE E. STEWART *Points*, A. M., Omaha, Neb. Housewife and teacher.

1876.

GEORGE A. GALE, A. B., Lake Worth, Fla. Merchant.
ELLA M. GALE *Kedzie*, A. B., Lansing, Mich. Teacher of art.
NELLIE SAWYER *Kedzie*, M. Sc., Manhattan, Kas. Professor of Household Economy and Hygiene, Kansas State Agricultural College.
CARRIE M. KIMBALL, A. B., Garden Grove, Cal. Art instructor.
MINERVA E. WHITMAN *Heiser*, A. B., Lyndon, Kas. Housewife.

1877.

Ella S. Child, B. Sc., Manhattan, Kas. Dressmaker.
George H. Failyer, M. Sc., Manhattan, Kas. Professor of Chemistry, Kansas State Agricultural College.
John F. Griffing, M. Sc., Topeka, Kas. Merchant.
Walter C. Howard, B. Sc., Winnebago, Ill. Minister.
Frederick O. Hoyt, B. Sc. Died in 1884.
Louis E. Humphrey, B. Sc., Chapman, Kas. Druggist.
James F. La Tourette, B. Sc., Fort Defiance, Ariz., Indian agency.
Marion F. Leasure, B. Sc., La Cygne, Kas. Lawyer.
William Ulrich, M. Sc., Manhattan, Kas. Contractor and builder.

1878.

Albert N. Godfrey, M. Sc., ———. Farmer and fruit grower.
Charles S. McConnell, B. Sc., Kansas City, Mo. Printer.
Geo. S. Platt, B. Sc. Died in 1878.
Amos E. Wilson, B. Sc., Leavenworth, Kas. Banker.

1879.

Arthur T. Blain, B. Sc., Lacanada, Cal. Nurseryman.
Etta Campbell *Blain*, B. Sc., Lacanada, Cal. Housewife.
Wilmer K. Eckman, B. Sc., Logansport, La. Lumber dealer.
Corvin J. Reed, B. Sc., St. Clere, Kas. Farmer.
Harry C. Rushmore, B. Sc., Topeka, Kas. Traveling salesman.
Wm. H. Sikes, B. Sc., Leonardville, Kas. Merchant and grain dealer.
Lewis A. Salter, B. Sc., Alva, O. T. Lawyer.
Ella Vincent *McCormick*, B. Sc., Clay Centre, Kas. Bookkeeper.
Clarence E. Wood, B. Sc., A. B., Erwin, O. T. Farmer.

1880.

Augustine Beacham, B. Sc., Seattle, Wash. Principal of schools.
Lizzie R. Cox *Kregar*, B. Sc., Milford, Kas. Housewife.
Emma Hoyt *Turner*, B. Sc., Cloquet, Wis. Housewife.
Emma Knostman *Huse*, B. Sc., Arkansas City, Kas. Housewife.
Grace Parker *Perry*, B. Sc., Pueblo, Colo. Housewife.
Noble A. Richardson, B. Sc., San Bernardino, Cal. Superintendent of city schools.
Maria E. Sickels *Davis*, B. Sc., Chicago, Ill. Housewife.

1881.

Flora Donaldson *Reed*, B. Sc., St. Clere, Kas. Housewife.
Ulysses G. Houston. B. Sc., Concordia, Kas. Lecturer.
Fletcher M. Jeffrey, B. Sc., Cripple Creek, Colo. Lawyer.
William J. Jeffrey, B. Sc., San Diego, Cal. Agent.
Darwin S. Leach, B. Sc.. ———, Africa.
William J. Lightfoot, B. Sc., Cripple Creek, Colo. Deputy United States mineral surveyor.
Dalinda Mason *Cotey*, B. Sc., Logan, Utah. Professor of domestic economy, Utah Agricultural College.
Wirt S. Myers, B. Sc, Tampa, Fla. Furniture manufacturer.

1882.

J. Chester Allen, B. Sc. Died in 1885.
Ida Cranford *Sloan*, B. Sc., Stillwater, Cal. Housewife.

Edward V. Cripps, B. Sc., ———.
Warren Knaus, M. Sc., McPherson, Kas. Editor and entomologist.
Mattie E. Mails *Coons*, B. Sc., Manhattan, Kas. Housewife.
Allie S. Peckham *Cordry*, B. Sc., Belleville, Kas. Housewife.
Belle Selby *Curtice*, B. Sc., Kansas City, Mo. Housewife.
Burton L. Short, B. Sc., Kansas City, Kas. City clerk.
John A. Sloan, B. Sc., Stillwater, Cal. Farmer and nurseryman.

1883.

James W. Berry, B. Sc., Jewell City, Kas. Farmer, contractor, and builder.
Mary C. Bower, B. Sc., Manhattan, Kas. Clerk.
Lewis W. Call, B. Sc., LL. M., Washington, D. C. Clerk in attorney general's office.
Emma E. Glossop, B. Sc., Emporia, Kas. Student, State Normal School.
William J. Griffing, B. Sc., Manhattan, Kas. Farmer and fruit grower.
Phœbe E. Haines, M. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.
Hortense L. Houston *Martin*, B. Sc., Concordia, Kas. Housewife.
Jacob Lund, M. Sc., Manhattan, Kas. Fireman and steam fitter, Kansas State Agricultural College.
Katie I. Meguire *Sheldon*, B. Sc., Riverside, Cal. Housewife.
J. Dana Needham, B. Sc., Lane, Kas. Merchant.
Milan T. Ward, B. Sc., M. D., Orion, Ill. Physician.
Julius T. Willard, M. Sc., Manhattan, Kas. Assistant Professor of Chemistry, Kansas State Agricultural College.

1884.

Emmet S. Andress, B. Sc., Lakin, Kas. Farmer.
Florence J. Brous, B. Sc., Kansas City, Kas. Teacher.
Bartholomew Buchli, M. Sc., D. V. S., Paxico, Kas. Veterinary surgeon. Teacher.
John H. Calvin, B. Sc., LL. B., Topeka, Kas. Lawyer.
Wm. A. Corey, B. Sc., Salt Lake City, Utah. Teacher and editor.
Henry M. Cottrell, M. Sc., Rhinecliff, N. Y. Superintendent of Ellerslie dairy farm.
Carrie F. Donaldson *Brown*, B. Sc., Portland, Ore. Housewife.
Florence A. Donaldson, B. Sc. Died in August, 1888.
Frank W. Dunn, B. Sc., Garden City, Kas. Assistant in irrigation, Experiment Station, Kansas State Agricultural College.
I. Day Gardiner, B. Sc., Bradford, Kas. Farmer.
Edwin H. Kern, B. Sc., Ionia, Kas. Farmer.
Marion M. Lewis, B. Sc., Ogden, Utah. Minister.
Charles L. Marlatt, M. Sc., Washington, D. C. First assistant in entomological division, United States department of agriculture.
Lincoln H. Neiswender, B. Sc., Silver Lake, Kas. Farmer.
Geo. C. Peck, B. Sc., Junction City, Kas. Printer.
Hattie L. Peck *Berry*, B. Sc., Jewell City, Kas. Housewife.
John W. Shartel, B. Sc., Guthrie, O. T. Lawyer.

1885.

Thomas Bassler, B. Sc., Geuda Springs, Kas. Teacher and nurseryman.
Albert Deitz, B. Sc., Kansas City, Mo. Merchant.
George E. Hopper, M. Sc., Arkansas City, Kas. Superintendent of waterworks.
Florence F. Hough, B. Sc., Melrose, Iowa.
Frank A. Hutto, B. Sc., Stillwater, O. T. Lawyer.
Allen Lewis, B. Sc., Chicago, Ill. Civil engineer.

Nellie J. Murphy, B. Sc., South Denver, Colo. Printer.

Arthur L. Noyes, B. Sc., Wabaunsee, Kas. Farmer.

Clarence D. Pratt, B. Sc., Joplin, Mo. Secretary lead and paint company.

Rollin R. Rees, B. Sc., Minneapolis, Kas. County attorney.

Frederick J. Rogers, M. Sc., Ithaca, N. Y. Instructor in physics, Cornell University.

Dorothy E. C. Secrest *Hungerford*, B. Sc., Randolph, Kas. Housewife.

Grace Wonsetler, B. Sc , Verbeck, Kas. Teacher.

Effie E. Woods *Shartel*, B. Sc., Guthrie, O. T. Housewife.

1886.

Lillie B. Bridgeman, M. Sc., San Diego, Cal. Teacher.

Louis P. Brous, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Paul H. Fairchild, B. Sc., M. D., New York, N. Y. Publisher of medical journals.

Abbott M. Green, B. Sc., Adin, Cal. Civil engineer and teacher.

James G. Harbord, B. Sc., Fort Leavenworth, Kas. Lieutenant Fifth Cavalry, U. S. army.

John U. Higinbotham, B. Sc., Chicago, Ill. Treasurer gas company.

Maria C. Hopper *Getty*, B. Sc., Downs, Kas. Housewife.

E. Ada Little *MacEwan*, B. Sc., Logan, Utah. Housewife.

Frank L. Parker, B. Sc., Pueblo, Colo. Telegraph operator.

Edward H. Perry, B. Sc., Perry, O. T. Editor and publisher.

H. Augustus Platt, B. Sc., Guthrie, O. T. Editor.

Ada H. Quinby *Perry*, B. Sc., Perry, O. T. Housewife.

Ida H. Quinby *Gardiner*, B. Sc., Bradford, Kas. Housewife.

Minnie Reed, M. Sc., Argentine, Kas. Teacher.

David G. Robertson, B. Sc., Chicago, Ill. Lawyer.

Edward O. Sisson, B. Sc., Chicago, Ill. Principal South Side school.

John W. Van Deventer, B. Sc., Sterling, Colo. Editor and publisher.

George W. Waters, B. Sc., Junction City, Kas. Teacher.

William E. Whaley, B. Sc., Salina, Kas. Principal high school.

F. Henrietta Willard *Calvin*, B. Sc., Topeka, Kas. Housewife.

John L. Wise, B. Sc., Smithboro, Ill. Merchant.

1887.

Edgar A. Allen, B. Sc., Perris, Cal. Superintendent of Indian schools.

Fred H. Avery, B. Sc., Wakefield, Kas. Merchant.

Claude M. Breese, M. Sc., Manhattan, Kas. Assistant in chemistry, Kansas State Agricultural College.

John B. Brown, M. Sc., Ponca, I. T. Superintendent of Indian schools.

Walter J. G. Burtis, B. Sc., Fredonia, Kas. Farmer.

Mark A. Carleton, M. Sc., Washington, D. C. Assistant in division of vegetable pathology, U. S. department of agriculture.

Nellie E. Cottrell *Stiles*, B. Sc., Helix, Cal. Housewife.

Bert R. Elliott, B. Sc., San Diego, Cal. Superintendent fruit farm.

Frederick B. Elliott, B. Sc., Manhattan, Kas. Real-estate and insurance agent.

Clara M. Keyes, B. Sc., Banner, Cal. Teacher.

Fred. G. Kimball, B. Sc., Hastings, Neb. Railway postal clerk.

Frederick A. Marlatt, B. Sc., Manhattan, Kas. Assistant in entomology, Experiment Station, Kansas State Agricultural College.

William J. McLaughlin, B. Sc., Bern, Kas. Teacher and editor.

Mary E. Moses, B. Sc., Manhattan, Kas. At home.

Charles A. Murphy, B. Sc., Kingman, Kas. Superintendent of schools.

Orlando G. Palmer, B. Sc., LL. M., Perry, O. T. Superintendent of schools.

Louis B. Parker, B. Sc. Died in June, 1889.

James E. Payne, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Seward N. Peck, B. Sc., Topeka, Kas. Cabinet maker, railroad shops.

George N. Thompson, B. Sc., Belmond, Iowa. Mechanic.

Willis M. Wright, B. Sc., Lake Arthur, La. Farmer.

1888.

Grant Arnold, B. Sc., Toledo, Wash. Teacher.

Bertha H. Bacheller, M. Sc., Junction City, Kas. Teacher.

Clement G. Clarke, B. Sc., New Haven, Conn. Student in Yale University.

Alexander C. Cobb, B. Sc., Wagoner, I. T. Farmer and carpenter.

Mattie Cobb *Clarke*, B. Sc., New Haven, Conn. Housewife.

Minnie H. Cowell, B. Sc., Going Villas, Steyning, Sussex, England. Hospital nurse.

Lyman H. Dixon, B. Sc., Buffalo, N. Y. Architect.

David G. Fairchild, M. Sc., Münster, Ger. Special student in botany.

Carl E. Friend, B. Sc., Soldier, Kas. Banker.

John R. Harrison, B. Sc., Salina, Kas. Railway postal clerk.

Humphrey W. Jones, B. Sc., Alma, Kas. Principal of schools.

Nathan E. Lewis, B. Sc., Grand Rapids, Mich. Draughtsman.

Abbie L. Marlatt, M. Sc., Providence, R. I. Instructor in domestic economy, high school.

William C. Moore, B. Sc., Junction City, Kas. Editor and publisher.

Ernest F. Nichols, B. Sc., Berlin, Ger. Professor of physics, Colgate University, Hamilton, N. Y., on leave of absence for study.

Harry E. Robb, B. Sc., Eureka, Kas. Farmer and county surveyor.

Anna Snyder, B. Sc., Oskaloosa, Kas. At home.

Edwin H. Snyder, B. Sc., Highlands, Colo. Editor.

Oliver L. Utter, B. Sc., Axtell, Kas. Minister.

Aaron Walters, B. Sc. Died in June, 1892.

Lora L. Waters, M. Sc., Manhattan, Kas. Teacher.

Daniel W. Working, jr., B. Sc., Fort Collins, Colo. Secretary state board of agriculture.

1889.

Emma A. Allen, B. Sc. Died in June, 1891.

Joseph W. Bayles, B. Sc., Ottawa, Kas. Student of theology.

Walter R. Browning, B. Sc., Hamlin, Kas. Farmer.

David E. Bundy, B. Sc., Holton, Kas. Minister.

Samuel S. Cobb, B. Sc., Wagoner, I. T. Druggist and postmaster.

Judson H. Criswell, B. Sc., Manhattan, Kas. Farmer.

Mattie I. Farley *Carr*, B. Sc., Oro, Wash. Housewife.

Clarence E. Freeman, M. Sc., Chicago, Ill. Special student in electricity, Armour Institute, Chicago, Ill.

Hattie L. Gale *Sanders*, B. Sc., Lake Worth, Fla. Housewife.

John S. Hazen, B. Sc., Des Moines, Iowa. United States weather bureau observer.

Albert B. Kimball, B. Sc., Scandia, Kas. Editor.

William Knabb, B. Sc., Hiawatha, Kas. Bank clerk.

Mary C. Lee, B. Sc., Manhattan, Kas. At home.

Alonzo A. Mills, B. Sc., Logan, Utah. Assistant in agriculture, Utah Agricultural Experiment Station.

Susan W. Nichols, B. Sc., St. Joseph, Mo. Music teacher.

Walter H. Olin, M. Sc., Osborne, Kas. Superintendent of schools.

Eli M. Paddleford, B. Sc., Rossville, Kas. Minister.

Maude F. Sayers, B. Sc., Ottawa, Kas. Bookkeeper.

Florine Secrest, B. Sc., Madison, Cal. Teacher.

Stanley Snyder, B. Sc., Oskaloosa, Kas. Farmer.

Charles W. Thompson, B. Sc., Holton, Kas. Dentist.

Jane C. Tunnell, B. Sc., Manhattan, Kas. Teacher.

Ina M. Turner *Bruce*, B. Sc., St. Louis, Mo. Housewife.

Robert U. Waldraven, B. Sc., Kickapoo, Kas. Minister.

Henry S. Willard, B. Sc., M. D., Manhattan, Kas. County physician.

1890.

Samuel I. Borton, B. Sc., Virgil, Kas. Teacher.

Frank A. Campbell, B. Sc., Highlands, Colo. Reporter.

Arthur F. Cranston, B. Sc., Parsons, Kas. Lawyer.

John Davis, B. Sc., Ashland, Kas. Principal of schools.

Grant W. Dewey, B. Sc., Manhattan, Kas. Photographer.

Charles J. Dobbs, B. Sc., Topeka, Kas. Lawyer.

Charles W. Earle, B. Sc., Denver, Colo. Advertising agent.

Schuyler C. Harner, B. Sc., Leonardville, Kas. Teacher and farmer.

John W. Ijams, B. Sc., Orlando, O. T. Teacher.

Bertha S. Kimball, B. Sc., Manhattan, Kas. Postgraduate student and microscopic draughtman, Kansas State Agricultural College.

Harriet E. Knipe, B. Sc., Manhattan, Kas. Teacher.

Nellie P. Little, B. Sc., New Haven, Conn. Postgraduate student, Yale University.

Ellsworth Thomas Martin, B. Sc., Georgetown, Colo. Miner and solicitor.

Silas C. Mason, M. Sc., Manhattan, Kas. Professor of Horticulture, Kansas State Agricultural College.

Wilton L. Morse, B. Sc., Mancos, Colo. Farmer.

Albert E. Newman, B. Sc., Watonga, O. T. County superintendent.

Julia R. Pearce, B. Sc., Manhattan, Kas. Librarian, State Agricultural College.

Emil C. Pfuetze, B. Sc., Burlington, Kas. Superintendent of waterworks.

William H. Sanders, B. Sc., Lake Worth, Fla. Plumber and builder.

Emma Secrest, B. Sc., Palo Alto, Cal. Special student in literature, Leland Stanford University.

Mary B. Senn, M. Sc., Fargo, N. D. Instructor in domestic economy, State Agricultural College.

Ralph Snyder, B. Sc., Oskaloosa, Kas. Farmer and teacher.

George E. Stoker, B. Sc., Topeka, Kas. Lawyer.

Walter T. Swingle, B. Sc., Eustis, Fla. Assistant in division of vegetable pathology, U. S. department of agriculture.

Gilbert J. Van Zile, B. Sc., Carthage, Ill. Farmer.

Harry N. Whitford, B. Sc., Wakefield, Kas. Principal of schools.

Thomas E. Wimer, B. Sc. Died in June, 1890.

1891.

William Aaron Anderson, B. Sc., Liberal, Kas. Lumber dealer.

William Sherman Arbuthnot, B. Sc., D. V. S., Republic, Kas. Veterinary surgeon and druggist.

Herman William Avery, B. Sc., Wakefield, Kas. Farmer.

Judd Noble Bridgman, M. Sc., Atchison, Kas. Farmer.

Robert James Brock, B. Sc., Manhattan, Kas. City attorney.

Francis Charles Burtis, B. Sc., Manhattan, Kas. Assistant in agriculture, Experiment Station, Kansas State Agricultural College.

Charles Albert Campbell, B. Sc., Auburn, N. Y. Student of theology, and instructor in logic and rhetoric, Auburn Seminary.

Spencer Norman Chaffee, B. Sc., Green, Kas. Teacher.

Ephraim Clay Coburn, B. Sc., Kansas City, Kas. Clerk in packing house.

Gertrude Coburn, B. Sc., Menomonie, Wis. Instructor in household economy, Stout Manual Training School.

Tina Louise Coburn, B. Sc., Kansas City, Kas. Teacher.

Rachel Callie Conwell *Thoburn*, B. Sc., Syracuse, Kas. Housewife.

Christine Mossman Corlett, B. Sc., Guthrie, O. T. Teacher.

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Kary Cadmus Davis, B. Sc., Austin, Minn. Principal of schools.

Thomas Clarke Davis, B. Sc., Benedict, Kas. Farmer.

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Anna Fairchild *White*, B. Sc., Manhattan, Kas. Housewife.

Harry Benson Gilstrap, B. Sc., Chandler, O. T. Editor and publisher.

Almon Arthur Gist, B. Sc., Wamego, Kas. Telegraph operator.

Amy Myrtle Harrington, B. Sc., Junction City, Kas. Teacher.

Delpha May Hoop, B. Sc., Manhattan, Kas. Teacher.

Mayme Amelia Houghton, B. Sc., Manhattan, Kas. Teacher.

Willis Wesley Hutto, B. Sc., St. George, Kas. Teacher.

George Victor Johnson, B. Sc., Sedan, Kas. Editor.

Frank Mullett Linscott, B. Sc., D.V.S., Ottawa, Kas. Veterinary surgeon.

Bessie Belle Little, B. Sc., New Haven, Conn. Student.

Albert Edward Martin, B. Sc., Pekin, Ill. Telegraph operator.

Nellie Evangeline McDonald, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

David Collins McDowell, B. Sc., Manhattan, Kas. Clerk.

Alfred Midgley, B. Sc., Minneapolis, Kas. Clerk.

Madeleine Wade Milner, B. Sc., Chicago, Ill. At home.

Paul Chambers Milner, B. Sc., Blue Island, Ill. Stenographer in railroad office.

Harry Elbridge Moore, B. Sc., Kansas City, Mo. Bookkeeper.

John Otis Morse, B. Sc., Mound City, Kas. Farmer.

Hattie May Noyes, B. Sc., Wabaunsee, Kas. Teacher.

Louise Reed, B. Sc., Selkirk, Kas. Teacher.

Artemus Jackson Rudy, B. Sc., Fresno, Cal. Fruit raiser.

Henry Vernon Rudy, B. Sc., Fresno, Cal. Fruit raiser.

Lottie Jane Short, M. Sc., Storrs, Conn. Professor of domestic economy, Storrs Agricultural College.

Ben Skinner, B. Sc., Kansas City, Mo. Student of medicine.

Caroline Scott Stingley *Van Blarcom*, B. Sc., Kansas City, Kas. Housewife.

Lillian Alice St. John, B. Sc., Manhattan, Kas. Teacher.

Ellis Cheney Thayer, B. Sc., Pawnee, O. T. Principal of Indian schools.

Sam L. Van Blarcom, B. Sc., Kansas City, Kas. Railway postal clerk.

Frank Albert Waugh, B. Sc., Stillwater, O. T. Professor of horticulture, Oklahoma Agricultural College.

Fannie Elizabeth Waugh, B. Sc. McPherson, Kas. At home.

Flora Emilie Wiest, B. Sc., Hall's Peak, N. M. Teacher.

Bertha Winchip, B. Sc., Manhattan, Kas. At home.

Alfred Orin Wright, B. Sc., Lake Arthur, La. Editor.

Effie Jeannetta Zimmerman, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

1892.

Grace Maria Clark, B. Sc., Manhattan, Kas. Clerk in executive offices and postgraduate student, Kansas State Agricultural College.

George L. Clothier, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Lillian Clyde Criner, B. Sc., Oakley, Kas. Teacher.

Harry Darnell, B. Sc., Earleton, Kas. Teacher.

William H. Edelblute, B. Sc., Farmington, Wash. Teacher.

Elizabeth Edwards, B. Sc., Randolph, Kas. Teacher.

John Frost, B. Sc., Blue Rapids, Kas. Teacher.

Effie Gilstrap, B. Sc., Chandler, O. T. Editor and publisher.

Ava Hamill *Tillotson*, B. Sc., Hill City, Kas. Housewife.

J. N. Harner, B. Sc., Emporia, Kas. Student, State Normal School.

Loyall S. Harner, B. Sc., Lasita, Kas. Farmer.

Charles Pinckney Hartley, B. Sc., Fraser, Idaho. Horticulturist.

John William Abraham Hartley, B. Sc., Manhattan, Kas. Teacher and horticulturist.

James Laird McDowell, B. Sc., Manhattan, Kas. Medical student.

Robert A. McIlvaine, B. Sc., Harveyville, Kas. Teacher.

Kate Oldham *Sisson*, B. Sc., Toronto, Can. Housewife.

Daniel Henry Otis, B. Sc., Manhattan, Kas. Assistant in agriculture, Experiment Station, Kansas State Agricultural College.

Ivan Bryan Parker, B. Sc., M. D., Hill City, Kas. Physician.

Warner S. Pope, B. Sc., Lawrence, Kas. Law student, State University.

Burton Homer Pugh, B. Sc., Oakland, Kas. Farmer.

Elias W. Reed, B. Sc., Avoca, Kas. Farmer.

Robert Stirling Reed, B. Sc., Emporia, Kas. Student, State Normal School.

Arthur Daniel Rice, B. Sc., Keats, Kas. Teacher.

Fred. C. Sears, B. Sc., Manhattan, Kas. Assistant in horticulture, Experiment Station, Kansas State Agricultural College.

Birdie E. Secrest, B. Sc., Randolph, Kas. Teacher.

May Secrest, B. Sc., Randolph, Kas. Teacher.

Ruth Tipton Stokes, B. Sc., Manhattan, Kas. Assistant in domestic economy, Kansas State Agricultural College.

Harry W. Stone, B. Sc., Sioux City, Iowa. Y. M. C. A. secretary.

Walter Percival Tucker, B. Sc., Rock, Kas. Teacher.

Mary Alice Vail *Waugh*, B. Sc., Stillwater, O. T. Housewife.

Robert Lynn Wallis, B. Sc., Topeka, Kas. Teacher.

Ora Rebecca Wells, B. Sc., Irving, Kas. Teacher.

Daniel F. Wickham, B. Sc., Topeka, Kas. Market gardener.

George Washington Wildin, Raton, N. M. Draughtsman, railroad shops

Charles Ernest Yeoman, B. Sc., Otis, Kas. Teacher.

1893.

Edmund Clarence Abbott, B. Sc., Alvin, Tex. Lawyer.

Edwin McMaster Stanton Curtis, B. Sc., Detroit, Mich. Clerk in railroad office.

Corinne Louise Daly *Burtis*, B. Sc., Manhattan, Kas. Housewife.

Laura Greeley Day, B. Sc., Manhattan, Kas. Assistant in sewing and postgraduate student, Kansas State Agricultural College.

Ione Dewey *Earle*, B. Sc., Denver, Colo. Housewife.

Albert Dickens, B. Sc., Eureka, Kas. Irrigation horticulturist, teacher near Alden.

Mary Maud Gardiner, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Susie Hall *Linscott*, B. Sc., Ottawa, Kas. Housewife.

Mary Frances Burgoyne Harman, B. Sc., Valley Falls, Kas. Teacher.

Ivy Frances Harner, B. Sc., Lasita, Kas. Teacher.

Margaretha Elise Horn, B. Sc., Ann Arbor, Mich. Postgraduate student, State University.

Marcia Ione Hulett, B. Sc., Edgerton, Kas. At home.

Mac F. Hulett, B. Sc., Lawrence, Kas. Printer.

Fred. Hulse, B. Sc., Manhattan, Kas. Farmer, Kansas State Agricultural College.

Charles Augustus Kimball, B. Sc., Manhattan, Kas. Law student.

Maude Ethel Knickerbocker, B. Sc., Spearfish, S. D. Student, State Normal School.

Thomas Eddy Lyon, B. Sc., Keats, Kas. Farmer and teacher.

William Otis Lyon, B. Sc., Clay Centre, Kas. Teacher.

McLeod Wilson McCrea, B. Sc., Bostwick, Neb. Teacher.

Rose Edith McDowell, B. Sc., Manhattan, Kas. At home.

George Lane Melton, B. Sc., Winfield, Kas. Insurance and loan agent.

Eusebia DeLong Mudge, B. Sc., Eskridge, Kas. Bookkeeper.

Nora Newell, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

August Fred. Niemoller, B. Sc., Emporia, Kas. Student, State Normal School.

Susie Amanda Noyes, B. Sc. Died in 1894.

Henry Leamer Pellett, B. Sc., Lawrence, Kas. Student in physics, State University.

Charles John Peterson, B. Sc., Paxico, Kas. Teacher.

Carl Frederic Pfuetze, B. Sc., Kansas City, Mo. Railway postal clerk.

John Dewitt Riddell, B. Sc., Kansas City, Mo. Medical student.

John Albert Rokes, B. Sc., Onaga, Kas. Law student.

Agnes Romick *Edgar*, B. Sc., Glasco, Kas. Housewife.

Fred. Raymond Smith, B. Sc., Manhattan, Kas. Law student.

George Wildman Smith, B. Sc., Manhattan, Kas. Student of medicine.

William Elmer Smith, B. Sc., Randolph, Kas. Teacher and law student.

John Eugene Thackrey, B. Sc., Crawford, Neb. Minister.

Joseph B. Thoburn, B. Sc., Syracuse, Kas. Irrigation farmer and horticulturist.

Charles Henry Thompson, B. Sc., St. Louis, Mo. Assistant in Shaw Botanical Gardens.

George K. Thompson, B. Sc., Irving, Kas. Stock buyer.

William James Yeoman, B. Sc., Emporia, Kas. Student, State Normal School.

1894.

Frank Weber Ames, B. Sc., Manhattan, Kas. Teacher, near Keats.

Clara Francelia Castle, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

George Luther Christensen, B. Sc., Manhattan, Kas. Mechanical engineer.

John Cornelius Christensen, B. Sc., Cleburne, Kas. Teacher, near Maple Hill.

Lorena Estella Clemons, B. Sc., Manhattan, Kas. Clerk in Secretary's office, and postgraduate student, Kansas State Agricultural College.

Martha Cottrell, B. Sc., Wabaunsee, Kas. At home.

Sarah Esther Cottrell *Wright*, B. Sc., Jennings, La. Housewife.

Alverta May Cress, B. Sc., Manhattan, Kas. At home.

Fannie Jane Cress, B. Sc., Steubenville, Ohio. Student, normal school.

Ernest A. Donaven, B. Sc., Koshkonong, Mo. Horticulturist.

Jephthah W. Evans, B. Sc., Manhattan, Kas. Agent.

Isabella Russell Frisbie, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Eugene Leonard Frowe, B. Sc., Topeka, Kas. Law student.

Walter Harling, B. Sc., Olsburg, Kas. Teacher and farmer.

Lorena Marguerite Helder, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Mark V. Hester, B. Sc., Haviland, Kas. Farmer and teacher.

Charles Ross Hutchings, B. Sc., Pomona, Kas. Farmer.

Isaac Jones, jr., B. Sc., Manhattan, Kas. Teacher, near Ada, and postgraduate student, Kansas State Agricultural College.

Stella Victoria Kimball, B. Sc., Manhattan, Kas. Postgraduate student, Kansas State Agricultural College.

Mary Eliza Lyman, B. Sc., Manhattan, Kas. At home.

William Henry Moore, B. Sc., Manhattan, Kas. Horticulturist and postgraduate student, Kansas State Agricultural College.

Sarah Moore *Foster*, B. Sc., Mount Ida, Kas. Housewife.

James Francis Odle, B. Sc., Rhinecliff, N. Y. Foreman Ellerslie farm.

Charles Randolph Pearson, B. Sc., Hoxie, Kas. County superintendent.

Horace Greeley Pope, B. Sc., Lawrence, Kas. Student, State University.

Minnie Louisa Romick, B. Sc., Niles, Kas. At home.

Winnie Luella Romick *Chandler*, B. Sc., Argentine, Kas. Housewife.

Victor Irvin Sandt, B. Sc., Marysville, Kas. Teacher.

John Alfred Scheel, B. Sc., Elk, Kas. Teacher.

Jacob Ulrich Secrest, B. Sc., Randolph, Kas. Farmer.

Charles Chrisfield Smith, B. Sc., Manhattan, Kas. Teacher, near Alma.

Jennie Ruth Smith, B. Sc., Manhattan, Kas. Teacher, near Mariadahl.

Wesley Ohio Staver, B. Sc., Kansas City, Mo. Law student.

John Stingley, B. Sc., Manhattan, Kas. Traveling salesman.

John Edwin Taylor, B. Sc., Berryton, Kas. Farmer.

Delbert L. Timbers, B. Sc., Beloit, Kas. Merchant.

Phœbe Carey Turner, B. Sc., Maple Hill, Kas. At home.

Samuel Robert Vincent, B. Sc., Orie, O. T. Farmer.

Lucy Helena Waters, B. Sc., Manhattan, Kas. Teacher.

SUMMARY.

The number of graduates up to 1895 is 397, of whom 136 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of bachelor of arts. Since 1877, all have received the degree of bachelor of science, after a four years' course in the sciences, with good English training.

Of the 261 men, 6 are deceased, and the remainder are reported in the following occupations:

Farmers	38
Fruit growers, nurserymen, and gardeners	13
Dairymen	2
Professors and instructors in agricultural colleges	5
Assistants in agricultural experiment stations	6

Assistants in U. S. department of agriculture	3
Secretary state board of agriculture	1
Teachers and students of special sciences	13
Veterinary surgeons	3
Mechanics	5
Civil, electrical and mechanical engineers	6
Contractors and builders	3
Architects and draughtsmen	3
General business men	21
Merchants	11
Printers	3
Telegraph operators and railroad agents	3
Photographer	1
Superintendents of public schools	6
Teachers in public schools	44
Teachers in Indian schools	3
Students in other institutions	10
Officers in U. S. army	2
Observers in U. S. weather service	1
Physicians and students of medicine	7
Druggist	3
Dentists	2
Editors	14
Ministers	8
Secretary Y. M. C. A	1
Lawyers and students of law	23
Officials and official clerks	6
Railway postal clerks	4
Lecturer	1
Publisher	1
Irrigation horticulturist	2
Unknown	2
Total	280
In two occupations	25
	255

Of the 136 women, 5 are deceased, and the remainder are occupied as follows:

Housewives	48
At home	14
Instructors in sewing	1
Teachers in household economy	7
Teachers in public schools	28
Bookkeepers	3
Teachers and students of special sciences	13
Teachers of music	1
Teachers of art	2
Clerks or stenographers	3
Printers	1
Milliner and dressmaker	2
Assistant librarian	1
Hospital nurse	1
Student in other institutions	1

Editor	1
Unknown	1
Total	134
In two occupations	3
	131

Occupations of Students who Pursued the Course beyond the First Year, but did not Graduate.

In 1892, requests were sent to all students not then in attendance who have been catalogued since 1887 as "second-year students," but who did not complete the course, to report their present occupation, and the one they expect to follow permanently. About 600 were addressed, and 45 per cent. responded. Undoubtedly a large number failed to receive the request, because of changes in residence, of which we had not been informed.

	MEN.		WOMEN.	
	Totals	*Per cent. of total reporting*	*Totals*	*Per cent. of total reporting*
Farming:				
Present	71	39		
Future	64	35		
Housekeeping:				
Present			41	47
Future			33	38
Other industries:				
Present	23	13	5	6
Future	15	8	5	6
Office work and commerce:				
Present	45	24	4	5
Future	32	16	3	3
Professions:				
Present	14	8	3	3
Future	34	18	5	6
Teaching:				
Present	19	10	25	28
Future	10	5	29	33
Students elsewhere: Present	12	7	7	8
Students here: Future	4	2		
Undecided: Future	25	13	12	14
Married			33	38
No occupation: Present			2	
Total reporting	184		87	

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Officers, Students and Graduates

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MANHATTAN.

* * *

1896-'97.

* * *

J. S. PARKS, State Printer,
TOPEKA, KAN.
1897.

Terms and Vacations.

Fall Term, 1897.

WEDNESDAY, SEPTEMBER 8.—Examination for admission, at 9 A. M.
THURSDAY, SEPTEMBER 9.—College year begins.
SATURDAY, OCTOBER 23.—Examination.
SATURDAY, DECEMBER 6.—Annual exhibition of the Alpha Beta Society.
FRIDAY AND SATURDAY, DECEMBER 17, 18.—Examination at close of fall term.
DECEMBER 19 TO JANUARY 3.—Winter vacation.

Winter Term, 1898.

MONDAY, JANUARY 3.—Examination for admission, at 9 A. M.
TUESDAY, JANUARY 4.—Winter term begins.
SATURDAY, JANUARY 29.—Annual exhibition of the Hamilton Society.
SATURDAY, FEBRUARY 12.—Examination.
SATURDAY, MARCH 12.—Annual exhibition of the Webster Society.
FRIDAY AND SATURDAY, MARCH 25, 26.—Examination at close of winter term.

Spring Term, 1898.

TUESDAY, MARCH 29.—Spring term begins.
SATURDAY, APRIL 23.—Annual exhibition of the Ionian Society.
SATURDAY, APRIL 30.—Examination.
TUESDAY AND WEDNESDAY, JUNE 7, 8.—Examination at close of year.
JUNE 5 TO 9.—Exercises of Commencement week.
THURSDAY, JUNE 9, AT 10:30 A. M.—Commencement.
JUNE 10 TO SEPTEMBER 7.—Summer vacation.

Fall Term, 1898.

WEDNESDAY, SEPTEMBER 7.—Examination for admission, at 9 A. M.
THURSDAY, SEPTEMBER 8.—College year begins.

Board of Regents.

Hon. HARRISON KELLEY (1901)[*], *President*,
Burlington, Coffey county.

Mrs. SUSAN J. ST. JOHN (1901), *Vice-President*,
Olathe, Johnson county.

Hon. C. B. HOFFMAN (1901), *Treasurer*,
Enterprise, Dickinson county.

Hon. T. J. HUDSON (1899), *Loan Commissioner*,
Fredonia, Wilson county.

Hon. C. R. NOE (1898),
Leon, Butler county,

Hon. C. B. DAUGHTERS (1898),
Lincoln, Lincoln county.

Hon. J. N. LIMBOCKER (1901),
Manhattan, Riley county.

Pres. THOS. E. WILL (*ex officio*), *Secretary*,

I. D. GRAHAM, *Assistant Secretary*,
Manhattan.

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[*] Term expires.

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Board of Instruction.

FACULTY.

THOMAS ELMER WILL, A. M. (*Harvard*), PRESIDENT,
Professor of Economics and Philosophy.

HENRY M. COTTRELL, M. S. (*Kansas State Agricultural College*),
Professor of Agriculture, Superintendent of Farm.

ALBERT S. HITCHCOCK, M. S. (*Iowa State Agricultural College*),
Professor of Botany.

JULIUS T. WILLARD, M. S. (*Kansas State Agricultural College*),
Professor of Applied Chemistry.

GEORGE F. WEIDA, PH. D. (*Johns Hopkins*),
Professor of Pure Chemistry.

EDWARD W. BEMIS, PH. D. (*Johns Hopkins*),
Professor of Economic Science.

OSCAR EUGENE OLIN, A. M. (*Kansas State Agricultural College*),
Professor of English Language and Literature.

FRANK PARSONS (*Cornell University*),
Professor of History and Political Science.

E. E. FAVILLE, B. S. (*Iowa State Agricultural College*),
Professor of Horticulture and Entomology, Superintendent of Orchards and Gardens.

MRS. HELEN CAMPBELL,
Professor of Household Economics, Superintendent of Domestic Science Departments.

JOHN D. WALTERS, M. S. (*Kansas State Agricultural College*),
Professor of Industrial Art and Designing.

MISS MARY F. WINSTON, PH. D. (*Gœttingen*),
Professor of Mathematics.

OZNI P. HOOD, M. S. (*Rose Polytechnic*),
Professor of Mechanics and Engineering, Superintendent of Workshops.

RALPH HARRISON, First Lieutenant 2d U. S Cavalry, (*West Point*),
Professor of Military Science and Tactics.

ALEXANDER B. BROWN (*Boston Music School*), A. M. (*Olivet*),
Professor of Music.

FREDRIC AUGUSTUS METCALF, O. M. (*Emerson College of Oratory*),
Professor of Oratory.

ERNEST R. NICHOLS, D. B. (*Iowa State Normal*), B. S., A. M. (*State University of Iowa*),
Professor of Physics.

PAUL FISCHER, B. Agr., M. V. D. (*Ohio State University*),
Professor of Veterinary Science.

IRA D. GRAHAM, A. M. (*Eureka*), Secretary,
Professor of Bookkeeping, Commercial Law, and Accounts.

CHARLES S. DAVIS (*Kansas State Normal School*),
Superintendent of Printing.

. . . .
Superintendent of Sewing.

Miss ALICE RUPP,
Instructor in English.

Miss JOSEPHINE C. HARPER,
Instructor in Mathematics.

Miss JULIA R. PEARCE, B. S. (*Kansas State Agricultural College*),
Librarian.

Note.—Names are arranged in alphabetical order of departments.

ASSISTANTS AND FOREMEN.

WILLIAM L. HOUSE,
Foreman of Carpenter Shop.

GEORGE SEXTON,
Foreman of Farm.

CON MORRISON BUCK, B. S.,
Assistant in Graphics.

WILLIAM BAXTER,
Foreman of Greenhouse.

CHARLOTTE J. SHORT, M. S.,
Assistant in Household Economics.

ENOS HARROLD,
Foreman of Iron Shop.

HELEN H. HIGH,
Assistant in Sewing.

STUDENT ASSISTANTS

(for 1896–'7.)

CON MORRISON BUCK, B. S., Surveying, Drawing.
EARL BUTTERFIELD, Horticulture.
GEORGE LUTHER CHRISTENSEN, B. S., Mechanical Dept., Algebra.
FRED VOLLEY DIAL, Gymnastics.
MARY MAUD GARDINER, B. S., Household Economy, Drawing.
ERNEST CHRISTIAN GASSER, Blacksmithing.
EVA GILL, A. B., English.
PHŒBE ELLEN HAINES, M. S., Drawing.
JOHN GEORGE HANEY, Agriculture.
WILLIAM LOGAN HALL, Horticulture.
IVY HARNER, B. S., Household Economy, Economic Science.
LORENA MARGUERITE HELDER, B. S., Music.
CLAY BERKEY INGMAN, Agriculture.
MARY ELIZA LYMAN, B. S., Calisthenics.
FRED HUGO MEYER, Horticulture.
THEO. WATTLES MORSE, B. S., Horticulture, Arithmetic.
CHARLES WESLEY PAPE, B. S., Blowpiping.
RUFUS M. PHILBROOK, Agriculture.
RAYMOND HAINES POND, Botany.
ADA RICE, B. S., English.
ISAAC ARCHIE ROBERTSON, B. S., Library.
THOMAS MEADE ROBERTSON, Printing.
HOMER JOSEPH ROBISON, Foundry.
MARK WHEELER, Surveying, Horticulture.
ABNER DAVIS WHIPPLE, Horticulture.
HARRY N. WHITFORD, B. S., Rhetoricals.
MIRIAM SWINGLE, B. S., Botany, Drawing.
SAMUEL ROBERT VINCENT, B. S., Surveying, Arithmetic.

Board of Instruction for 1896-'97.

FACULTY.

GEORGE T. FAIRCHILD, LL. D. (*Oberlin*), PRESIDENT,
Professor of Logic and Philosophy.

GEORGE H. FAILYER, M. S. (*Kansas Agricultural College*),
Professor of Chemistry and Mineralogy.

EDWIN A. POPENOE, A. M. (*Washburn*),
Professor of Entomology and Zoology.

DAVID ERNEST LANTZ, M. S. (*Pennsylvania State Normal*),
Professor of Mathematics.

JOHN D. WALTERS, M. S. (*Kansas Agricultural College*),
Professor of Industrial Art and Designing.

IRA D. GRAHAM, A. M. (*Eureka*),
Secretary, Instructor in Bookkeeping.

OSCAR EUGENE OLIN,
Professor of English Language and Literature.

MRS. NELLIE SAWYER KEDZIE, M. S. (*Kansas Agricultural College*),
Professor of Household Economy and Hygiene.

MRS. ELIDA E. WINCHIP,
Superintendent of Sewing.

OZNI P. HOOD, M. S. (*Rose Polytechnic*),
Professor of Mechanics and Engineering, Superintendent of Workshops.

ALEXANDER B. BROWN (*Graduate of Boston Music School*), A.M. (*Olivet*),
Professor of Music.

JOHN S. C. THOMPSON,
Superintendent of Printing.

FRANCIS H. WHITE, A. M. (*Princeton*),
Professor of History and Political Science.

CHARLES C. GEORGESON, M. S. (*Michigan Agricultural College*),
Professor of Agriculture, Superintendent of Farm.

ERNEST R. NICHOLS, D. B. (*Iowa State Normal*), B. S., A. M. (*State University of Iowa*),
Professor of Physics.

NELSON S. MAYO, M. S. (*Michigan Agricultural College*), D. V. S. (*Chicago Veterinary College*),
Professor of Physiology and Veterinary Science.

JULIUS T. WILLARD, M. S. (*Kansas Agricultural College*),
Associate Professor of Chemistry.

ALBERT S. HITCHCOCK, M. S. (*Iowa Agricultural College*),
Professor of Botany.

SILAS C. MASON, M. S. (*Kansas Agricultural College*),
Professor of Horticulture, Superintendent of Orchards and Gardens.

Miss JOSEPHINE C. HARPER,
Instructor in Mathematics.

Miss ALICE RUPP,
Instructor in English.

HARRY G. CAVENAUGH, Captain 13th U. S. Infantry,
Professor of Military Science and Tactics.

THOMAS ELMER WILL, A. M. (*Harvard*),
Professor of Economic Science.

JULIA R. PEARCE, B. S. (*Kansas Agricultural College*),
Librarian.

ASSISTANTS AND FOREMEN.

CLAUDE M. BREESE, M. S. (*Kansas Agricultural College*),
Assistant in Chemistry.

WILLIAM BAXTER,
Foreman of Greenhouse.

WILLIAM L. HOUSE,
Foreman of Carpenter Shop.

ENOS HARROLD,
Foreman of Iron Shop.

GEORGE SEXTON,
Foreman of Farm.

BERTHA WINCHIP,
Assistant in Sewing.

OTHER OFFICERS.

GRACE M. CLARK, B. S.,
Stenographer in Executive Offices.

LORENA E. CLEMONS, B. S.,
Clerk in Executive Offices.

CHARLES A. GUNDAKER,
Engineer.

ANDREW C. McCREARY,
Janitor.*

JACOB LUND, M. S.,
Fireman and Steam Fitter.

* Deceased January 29, 1897.

Experiment Station.

Council.

PRESIDENT FAIRCHILD, Chairman, *ex officio.*
PROFESSOR FAILYER, Chemistry.
PROFESSOR POPENOE, Entomology.
PROFESSOR GEORGESON, Agriculture.
PROFESSOR MAYO, Veterinary Science.
PROFESSOR HITCHCOCK, Botany.
PROFESSOR MASON, Horticulture.

I. D. GRAHAM, Secretary.

Assistants.

J. T. WILLARD, M. S., Chemistry.
F. A. MARLATT, B. S., Entomology.
F. C. BURTIS, M. S., Agriculture.
D. H. OTIS, B. S., Agriculture.
J. B. S. NORTON, Botany.
F. C. SEARS, B. S., Horticulture, Foreman of Gardens. †
ISAAC JONES, B. S., Horticulture, Foreman of Gardens
ISAAC JONES, B. S., Irrigation. ‡

† Until January 1, 1897.
‡ Until October 31, 1896.

Other Officers.

WILLIAM CANFIELD LEE, A. B.,
Private Secretary to President.

LORENA E. CLEMONS, B. S.,
Clerk in Secretary's Office.

ROBERT HUDDLESON,
Engineer.

EUGENE EMRICK,
Janitor.

JACOB LUND, M. S.,
Fireman and Steam Fitter.

Experiment Station.

Council.

PRESIDENT WILL, Chairman, *ex officio.*
PROFESSOR COTTRELL, Agriculture.
PROFESSOR HITCHCOCK, Botany.
PROFESSOR WILLARD, Chemistry.
PROFESSOR FAVILLE, Horticulture.
PROFESSOR FISCHER, Veterinary Science.

I. D. GRAHAM, Secretary.

Assistants.

F. C. BURTIS, M. S., Agriculture.
D. H. OTIS, B. S., Agriculture.
GEORGE L. CLOTHIER, B. S., Botany.
PERCIVAL J. PARROTT, A. B., Entomology.
WM. L. HALL, Horticulture.

NOTE.— Departments are arranged in alphabetical order.

Students.

POST-GRADUATES.

[NOTE.— Studies pursued during the year printed in italic.]

CANDIDATES FOR MASTER'S DEGREE, 1897.

Clara Francelia Castle, B. S. '94........*Domestic Economy*, *Botany*.
Manhattan, Riley county.

Grace Maria Clark, B. S. '92...........*Botany*, *Horticulture*.
Manhattan, Riley county.

Daisy Day, B. S. '95...................*Domestic Economy*, *Chemistry*.
Manhattan, Riley county.

Mary Maud Gardiner, B. S. '93.........*Domestic Economy*, *Chemistry*.
Bradford, Wabaunsee county.

Ivy Frances Harner, B. S. '93..........*Domestic Economy*, *Chemistry*, *Economic Science*.
Manhattan, Riley county.

Daniel Henry Otis, B. S. '92............*Agriculture*, *Botany*.
Manhattan, Riley county.

Theodore Wattles Morse, B. S. '95......*Horticulture*, *Botany*.
Mound City, Linn county.

IN COURSE LEADING TO MASTER'S DEGREE.

Carl D. Adams, B. S. '95...............Entomology, *Horticulture*.
Osawkie, Jefferson county.

Con Morrison Buck, B. S. '96...........*Engineering*, Physics, *Mathematics*, *Architecture and Designing*.
Oskaloosa, Jefferson county.

George Luther Christensen, B. S. '94...Physics, *Engineering*, *Mathematics*, *Botany*.
Mariadahl, (Riley county.)

Lorena Estella Clemons, B. S. '94.......Physics, *Domestic Economy*, *Music*.
Manhattan, Riley county.

George Lemon Clothier, B. S. '92.......*Botany*, *Horticulture*.
Vera, Wabaunsee county.

Florence Ruth Corbett, B. S. '95........*Domestic Economy*, Botany, *Architecture and Designing*.
Manhattan, Riley county.

Judson H. Criswell, B. S. '89...........*Agriculture*, *Botany*, Economic Science.
Manhattan, Riley county.

Lorena Marguerite Helder, B. S. '94....*Domestic Economy*, Entomology, *Music*, *German*.
Manhattan, Riley county.

Isaac Jones, B. S. '94...................*Horticulture*, Entomology, Botany.
Oakley, Logan county.

Marian Elizabeth Jones, B. S. '95 .....*Domestic Economy*, *Botany*.
Manhattan, Riley county.

Stella Victoria Kimball, B. S. '94........*Zoology*, *Domestic Economy*, *Architecture and Designing*.
Manhattan, Riley county.

Mary Eliza Lyman, B. S. '94............*Domestic Economy*, *Botany*.
Manhattan, Riley county.

LIBRARY AND AGRICULTURAL SCIENCE HALL.

J. D. Walters, Del.

DOMESTIC SCIENCE HALL.

William Henry Moore, B. S. '94.........*Horticulture*, *Botany*.
Manhattan, Riley county.

Charles Wesley Pape, B. S. '95..........*Zoology*, *Architecture and Designing*, *Botany*.
Topeka, Shawnee county.

Howard Newton Rhodes, B. S. '96......*Architecture and Designing*, Physics.
Manhattan, Riley county.

Ada Rice, B. S. '95.....................*Domestic Economy*, *Botany*.
Manhattan, Riley county.

Herbert F. Roberts, A. B. '91 (K. S. U.), LL. B. '93 (N. W. U.), *Botany*, *Horticulture*, *Chemistry*.
Manhattan, Riley county.

Miriam Swingle, B. S. '96..............*Botany*, *Architecture and Designing*, *Domestic Economy*.
Manhattan, Riley county.

Harry N. Whitford, B. S. '90...........*Botany*, *Horticulture*, *German*.
Manhattan, Riley county.

NON-RESIDENT.

Edward Jones Abell, B. S. '95..........*Horticulture*, Entomology.
Scandia, Republic county.

George E. Rose.......................*Entomology*, *Horticulture*.
Kansas City, Wyandotte county.

Charles Henry Thompson, B. S., '93....*Botany*, *Horticulture*.
Columbia, Mo.

Mrs. Ava Hamill Tillotson, B. S. '92....*Zoology*, *Domestic Economy*.
Hill City, Graham county.

IN ADVANCED WORK NOT LEADING TO A DEGREE.

May Haines Bowen, B. S. '96...........*English Literature*, *History*, *Domestic Economy*.
Manhattan, Riley county.

Isabelle Russell Frisbie, B. S. '94.......*Domestic Economy*.
Manhattan, Riley county.

Eva Gill, A. B. '95 (K. U.).............*Mathematics*, *History*, Physiology, *Domestic Economy*.
Manhattan, Riley county.

Harvey G. Gilkerson, C. E. '95.........*Assaying*.
Ophir, Colo.

Phœbe Ellen Haines, B. S. '83, M. S. '87.*Domestic Economy*, *Drawing*.
Manhattan, Riley county.

Eleanor Harris, A. B..................*Domestic Economy*, *Drawing*.
Belleville, Republic county.

Gertrude Julia Havens, B. S. '96.......*Domestic Economy*.
Dwight, Morris county.

Bertha Sarah Kimball, B. S. '90, M. S. '95, *Entomology*, *Botany*.
Manhattan, Riley county.

Sue Long, B. S. '96....................*Literature*, *Domestic Economy*.
Manhattan, Riley county.

Ellen Norton, B. S. '96.................*Botany*, *Domestic Economy*.
Manhattan, Riley county.

Isaac Archie Robertson, B. S. '96.......*Economic Science*.
Manhattan, Riley county.

Fred Coleman Sears, M. S. '96..........*Botany*.
Manhattan, Riley county.

Marietta Smith, B. S. '95...............*Domestic Economy*.
Manhattan, Riley county.

Gertrude Stump, B. S. '96..............*Domestic Economy*.
Manhattan, Riley county.

Samuel Robert Vincent, B. S. '94....... *Mathematics.*
Orie, O. T.

Bertha Winchip, B. S. '91.............. *Domestic Economy, Literature.*
Manhattan, Riley county.

FOURTH YEAR.

Name.	*Post-office and County (or State).*
Cora Atwell,	Manhattan, Riley.
Roger William Bishoff,	Eudora, Douglas.
Mary Frances Carnell,	Bunker Hill, Russell.
William Burns Chase,	Hoyt, Jackson.
Frank E. Cheadle,	Erwin, *Oklahoma.*
Robert Waitman Clothier,	Vera, Wabaunsee.
Maggie A. Correll,	Manhattan, Riley.
Mabel Crump,	Manhattan, Riley.
Fred Volley Dial,	Cleburne, Riley.
Viola Grace Dille,	Edgerton, Johnson.
Samuel Dolby,	Longford, Clay.
George Doll,	Larned, Pawnee.
Eugene Emrick,	Lone Tree, *Missouri.*
Anna Phillipina Engel,	Manhattan, Riley.
Emma Finley,	Manhattan, Riley.
Mary Finley,	Manhattan, Riley.
Martha Fox,	Manhattan, Riley.
Philip Fox,	Manhattan, Riley.
Ned Merrill Green,	Manhattan, Riley.
William Logan Hall,	Anthony, Harper.
Mary Eliza Haulenbeck,	Manhattan, Riley.
Lewellyn Gaines Hepworth,	Burlingame, Osage.
Ina Emma Holroyd,	Manhattan, Riley.
Myrtle Hattie Hood,	Manhattan, Riley.
Charles Henry Hoop,	Manhattan, Riley.
Edward Leonard Hougham,	Manhattan, Riley.
Winfred Anna Houghton,	Manhattan, Riley.
Bret Redmon Hull,	Alta Vista, Wabaunsee.
Clay Berkey Ingman,	Barnes, Washington.
Ary Cordelia Johnson,	Success, Russell.
Gertrude May Lyman,	Manhattan, Riley.
Frederick Hugo Meyer,	Menager, (Leavenworth.)
Valentine Maelzer,	Neuchatel, Nemaha.
Sherman Bodwell Newell,	Zeandale, Riley.
Oliver Esra Noble,	Manhattan, Riley.
Jesse Baker Norton,	Manhattan, Riley.
Mary Augusta Norton,	Manhattan, Riley.
Bertha Olivia Olson,	Manhattan, Riley.
Hilda Sophia Olson,	Manhattan, Riley.
Russell John Peck,	Big Valley, *Texas.*
William Oscar Peterson,	Randolph, Riley.
Emelie Matilde Pfuetze,	Manhattan, Riley.
Eva Louise Philbrook,	Chepstow, Washington.
Rufus M. Philbrook,	Chepstow, Washington.

Name.	*Post-office and County* (*or State*).
William Joseph Rhoades,	Gardner, Johnson.
Carl Rice,	Manhattan, Riley.
Thomas Meade Robertson,	Manhattan, Riley.
Homer Joseph Robison,	Yates Center, Woodson.
Edward Shellenbaum,	Manhattan, Riley.
Alice Myrtle Shofe,	Manhattan, Riley.
Charles Wesley Shull,	Manhattan, Riley.
Alfred Caleb Smith,	Manhattan, Riley.
Phœbe Jane Smith,	Manhattan, Riley.
Wilhelmina Henrietta Spohr,	Manhattan, Riley.
Charles Harrison Stokely,	Burlingame, Osage.
John E. Trembly,	Council Grove, Morris.
Harriet Agnes Vandivert,	Manhattan, Riley.
Olive Voiles,	Manhattan, Riley.
Elsie Lucile Waters,	Manhattan, Riley.
John Minton Westgate,	Westgate, Geary.
Mark Wheeler,	Bridgeport, Saline.
Clare Annie Wilson,	Mapleton, Bourbon.

THIRD YEAR.

Joshua William Adams,	Marvin, Phillips.
Samuel John Adams,	Marvin, Phillips.
Thomas Walter Allison,	Florence, Marion.
William Anderson,	Cleburne, (Pottawatomie).
Jessie G. Bayless,	Yates Center, Woodson.
John Harold Blachly,	Manhattan, Riley.
Albert Edwin Blair,	Quenemo, Osage.
John Harvey Bower,	Eureka, Greenwood.
Hope Brady,	Manhattan, Riley.
Robert Henry Brown,	Manhattan, Riley.
Earl Butterfield,	Hull, Marshall.
Jennette Carpenter,	Orion, *Michigan*.
John Alfred Conover,	Sabetha, Nemaha.
Minnie Laura Copeland,	Quenemo, Osage.
Lucy Maria Cottrell,	Wabaunsee, Wabaunsee.
George Retilley Crawford,	Manhattan, Riley.
Cassie Belle Dille,	Edgerton, Johnson.
Cora Elizabeth Ewalt,	Manhattan, Riley.
Guy Francis Farley,	Melvern, Osage.
Josie Finley,	Manhattan, Riley.
Annie Viola Hanson,	Manhattan, Riley.
Walter Eugene Hardy,	Manhattan, Riley.
James Madison Harvey,	Junction City, (Riley.)
Emmett Vivian Hoffman,	Enterprise, Dickinson.
Guy Dudley Hulett,	Edgerton, Johnson.
Maude Parker Hutto,	Manhattan, Riley.
Bertha Ingman,	Barnes, Washington.
John Martin Kessler,	Topeka, Shawnee.
Bessie May Locke,	Manhattan, Riley.
Olive Long,	Manhattan, Riley.
William Andrew McCullough,	Delavan, Morris.

Name.	*Post-office and County (or State).*
George Garfield McDowell,	Manhattan, Riley.
Inez Isadore Manchester,	Chiles, Miami.
Florence Adelia Martin,	Junction City, (Riley.)
Henry Alba Martin,	Junction City, (Riley.)
Alice Maude Melton,	Manhattan, Riley.
George Gerkein Menke,	Garden City, Finney.
Mary Frances Minis,	Manhattan, Riley.
May Moore,	Manhattan, Riley.
Hattie Grace Nichols,	Liberal, Seward.
Schuyler Nichols,	Liberal, Seward.
Albert Alden Paige,	Manhattan, Riley.
Lucy Junie Parks,	Manhattan, Riley.
Ernest Byron Patten,	Silver Lake, Shawnee.
Jeanette Perry,	Manhattan, Riley.
John Milton Pierce,	Genoa, *Illinois.*
William Poole,	Briggs, Geary.
Willis Thomas Pope,	Lincolnville, Marion.
Otto Independence Purdy,	Fairview, Brown.
Gertrude Rhodes,	Manhattan, Riley.
Henry William Rogler,	Matfield Green, Chase.
Martin Wilbur Sanderson,	Reedville, Marshall.
Olive Shelden,	Manhattan, Riley.
Oliver Russell Smith,	Manhattan, Riley.
Edwin Lee Smith,	Manhattan, Riley.
Bertha Spohr,	Manhattan, Riley.
Harry Ashford Stingley,	Manhattan, Riley.
Grace Jessie Stokes,	Manhattan, Riley.
Tacy Vernon Stokes,	Manhattan, Riley.
Harriet Emerson Thackrey,	Manhattan, Riley.
Henry Marsden Thomas,	Melvern, Osage.
Fred Dorsey Waters,	Manhattan, Riley.
Abner Davis Whipple,	Olivet, Osage.
Charles Bernard White,	Waverly, Coffey.
Adelaide Frances Wilder,	Manhattan, Riley.
Josephine Hannah Wilder,	Manhattan, Riley.
Nannie Elizabeth Williams,	Edgerton, Johnson.
Frederick Zimmerman,	Moray, Doniphan.
Kate Elizabeth Zimmerman,	Moray, Doniphan.

SECOND YEAR.

Bonnie Frances Adams,	Marvin, Phillips.
Eslie Clark Adams, jr.,	Terryton, Finney.
Emory Sherwood Adams,	Manhattan, Riley.
Morris Carpenter Adams,	Marvin, Phillips.
Delmer Akin,	Manhattan, Riley.
Elizabeth Edna Asbury,	Topeka, Shawnee.
Hubert Charles Avery,	Dodge City, Ford.
Melvia Fairetta Avery,	Manhattan, Riley.
Etta Barnard,	Manhattan, Riley.
Maude Barnes,	Alma, Wabaunsee.
Charles Felix Bartholomees,	Greeley, Anderson.

Name.	*Post-office and County (or State).*
Aaron Schuyler Berry,	Manhattan, Riley.
Minerva Blachly,	Manhattan, Riley.
Otis Neel Blair,	Quenemo, Osage.
Fred. Winchester Bobbitt,	Tulsa, *Indian Territory.*
Lillie Grace Bolton,	Paxico, Wabaunsee.
James Courtney Bolton,	Paxico, Wabaunsee.
Georgia Brooks,	Manhattan, Riley.
Zernie De Earl Brown,	Twin Mound, Douglas.
Elizabeth Barrett Browning,	Manhattan, Riley.
Charles Vernon Bunch,	Jewell, Jewell.
Joseph Abbott Butterfield,	Topeka, Shawnee.
Sophronia Del Channell,	Chalk Mound, Wabaunsee.
Mabel Illinois Chrisman,	Hutchinson, Reno.
Joseph Bryson Corbett,	Manhattan, Riley.
Harry Corliss,	Cedar Junction, Johnson.
Willett Ranson Correll,	Manhattan, Riley.
Ernest Lerned Cottrell,	Wabaunsee, Wabaunsee.
John Francis Crowl,	Chino, *California.*
Ethel Day,	Lincoln, Lincoln.
Foster Hamilton Day,	Manhattan, Riley,
Alfred Burton Dille,	Edgerton, Johnson.
Emma Phillipine Doll,	Larned, Pawnee.
Elmer Alexander Drown,	Grenada, Nemaha.
Harry Eugene Drown,	Grenada, Nemaha.
Benjamin Franklin Durant,	Riley, Riley.
George Crook Dye,	Niotaze, Chautauqua.
Lillie Eakin,	Manhattan, Riley.
Lottie Ethel Eakin,	Manhattan, Riley.
Edwin Amos Eggleston,	Columbus, Cherokee.
Mary Elizabeth Becker Faris,	Kanopolis, Ellsworth.
Don Scott Farman,	Manhattan, Riley.
Edwin Oscar Farrar,	Axtell, Marshall.
Leslie Arthur Fitz,	Vinland, Douglas.
Harry Verne Forest,	Thayer, Neosho.
William Lloyd Garrettson,	Topeka, Shawnee.
Marion Gilkerson,	Manhattan, Riley.
Charles M. Ginter,	Valley Falls, Jefferson.
George McClung Green,	Manhattan, Riley.
Francis Joseph Habiger,	Bushton, Rice.
Elizabeth Hall,	Manhattan, Riley.
Frank Robbins Hall,	Manhattan, Riley.
John George Haney,	Courtland, Republic.
Florence Harling,	Olsburg, Pottawatomie.
Myrtle Mary Harner,	Manhattan, Riley.
John Andrew Harvey,	Junction City, (Riley.)
Charles W. Hatch,	Manhattan, Riley.
Herbert Fiske Hatch,	Manhattan, Riley.
Elmer Hathaway,	Grant, Riley.
William Alfred Hayward,	Manhattan, Riley.
Nellie Henderson,	Alma, Wabaunsee.
Grace Edna Hill,	Phillipsburg, Phillips.

Name.	*Post-office and County (or State).*
Hiram Adsit Holzer,	Girard, Crawford.
Isla Marie Hooker,	Manhattan, Riley.
Matthaus Heinrich Horn,	Westerbergen, *Germany.*
Stella May Hougham,	Manhattan, Riley.
Ralph John Wesley Howard,	Manhattan, Riley.
John Frederic Howe,	Syracuse, Hamilton.
William Mattheson Ireland,	Bronson, Bourbon.
Charles Clifford Jackson,	Gypsum, Saline.
Fred Emanuel Johnson,	Melvern, Osage.
Harry Wallace Johnston,	Caldwell, Sumner.
Lot Parker Keeler,	Centropolis, Franklin.
Charles Percy King,	Ogamaw, *Arkansas.*
Albert Thomas Kinsley,	Oakley, Logan.
Evangeline Cleora Kneeland,	Milford, Geary.
Frank Elmer LaShelle,	Chepstow, Washington.
Christian Dagobert Lechner,	Morganville, Clay.
Arthur J. Leonard,	Mahaska, Washington.
Clare Long,	Manhattan, Riley.
John Alexander Lovette,	Crescent, Kiowa.
Harvey McCaslin,	Barnes, Washington.
Louisa Mary Maelzer,	Neuchatel, Nemaha.
George Webster Manchester,	Chiles, Miami.
Katie Anna Manley,	Council Grove, Morris.
Clark Mansfield,	Junction City, Geary.
George Martinson,	Randolph, Riley.
Claud Masters,	Hillsdale, Miami.
Myrtle Mather,	Waverly, *Nebraska.*
August Centennial Miller,	De Soto, Johnson.
Margaret Jane Minis,	Manhattan, Riley.
Robert Bertice Mitchell,	Florence, Marion.
Charles Louis Moehlman,	Manhattan, Riley.
Delia Miriam Monroe,	Whiting, Jackson.
Fred. Byers Morlan,	White Rock, Republic.
Jennie June Needham,	Lane, Franklin.
Enos Alanson Nelson,	Smith Centre, Smith.
Louis Anthony Nelson,	Marysville, Marshall.
Robert Christian Nelson,	Greenleaf, Washington.
Roscoe Townley Nichols,	Liberal, Seward.
Hans Peter Nielsen,	Denmark, Lincoln.
Fannie Gertrude Noyes,	Wabaunsee, Wabaunsee.
Harry Delphos Orr,	Riley, Riley.
Kate Paddock,	Manhattan, Riley.
Carrie Vashti Painter,	Meade, Meade.
James Ralph Payne,	Waterville, Marshall.
Anna C. Pfuetze,	Manhattan, Riley.
May Louise Pierce,	Genoa, *Illinois.*
Mabel Clair Pond,	Topeka, Shawnee.
Ernest Poston,	Netawaka, Jackson.
Andrew Pottorf,	Riley, Riley.
Laura Ida Pritchard,	Manhattan, Riley.
Mary B. Pritner,	Grant, Riley.

Name.	*Post-office and County (or State).*
Llewellyn Victor Putnam,	Manhattan, Riley.
Porter Hayse Rader,	Manhattan, Riley.
Delmer William Randall,	Manhattan, Riley.
Nora May Reed,	Genoa, *Illinois.*
Jennie Florence Ridenour,	Manhattan, Riley.
William Harry Roberts,	Wahlsburg, Riley.
Ferdinand John Rumold,	Dillon, Dickinson.
Alvira Salkeld,	Manhattan, Riley.
Bernard Hugo Schultze,	Michigan Valley, Osage.
Otto David Secrest,	Randolph, Riley.
Dora Shartel,	Wamego, Pottawatomie.
Frank Sesions Shelton,	Brisbane, *Queensland.*
Harley Lee Snodgrass,	Manhattan, Riley.
Milton David Snodgrass,	Manhattan, Riley.
Grace Ermine Spalding,	Eureka, Greenwood.
Stella Stewart,	Manhattan, Riley.
Annie Louisa Streeter,	Milford, Geary.
Leo Cornelius Studer,	North Topeka, Shawnee.
William Henry Swart,	Manhattan, Riley.
Fayette Charles Sweet,	Burlington, Coffey.
Isabella Kent Symns,	Brenner, Doniphan.
Perrin K. Symns,	Brenner, Doniphan.
Rose Jane Tannehill,	Wakefield, Clay.
Jennie Ann Tappen,	Delphos, Ottawa.
Leon Henry Thomas,	Oakley, Logan.
Thomas Ed. Thompson,	Lincoln Centre, Lincoln.
Lizzie Frances Threlkeld,	Gypsum City, Saline.
Otho Sprague True,	Vera, Wabaunsee.
James Otis Tulloss,	Rantoul, Franklin.
Willie Guy Tulloss,	Rantoul, Franklin.
Harry Castle Turner,	Rock Creek, Jefferson.
Raymond S. Vail,	Manhattan, Riley.
Thomas P. Van Orsdol,	Silver Lake, Shawnee.
Orville Vinall,	Oakley, Logan.
George Franklin Wagner,	Enterprise, Dickinson.
Fred Walters,	Manhattan, Riley.
Margaret Warner,	Manhattan, Riley.
Mary Lana Waugh,	Manhattan, Riley.
Ella Weeks,	Lincoln, Lincoln.
Sarah Cornelia Weeks,	Lincoln, Lincoln.
Carl Wheeler,	Bridgeport, Saline.
Lou Evert White,	Jewell, Jewell.
May Delphene White,	Jewell, Jewell.
Alexander George Wilson,	Mapleton, Bourbon.
Frederick Otto Woestemeyer,	Bethel, Wyandotte.
Alice Ethel Wolfley,	Ontario, Jackson.
Royal Samuel Wood,	Strong City, Chase.
Ralph Edward Worden,	Syracuse, Hamilton.
Frank Homer Yeager,	Birley, Chase.
Harvey W. Yenawine,	Manhattan, Riley.
William H. Young,	Yates Center, Woodson.

FIRST YEAR.

Name.	*Post-office and County (or State).*
Lizzie Jane Agnew,	Yates Center, Woodson.
Fredrick Car Alexander,	Holton, Jackson.
Grace Allingham,	Manhattan, Riley.
Howard Allman,	Manhattan, Riley.
Edgar McCall Amos,	Manhattan, Riley.
William Mordecai Amos,	Manhattan, Riley.
Cecil Girard Anderson,	Manhattan, Riley.
Ronald Bruce Anderson,	Bronson, Allen.
Alice Amanda Arnold,	Manhattan Riley.
Francis Marion Atwell,	Manhattan, Riley.
Minnie Atwell,	Manhattan, Riley.
Effie Elizabeth Bailey,	Manhattan, Riley.
Alvah I. Bain,	Marysville, Marshall.
Harry Bainer,	Ottawa, Franklin.
Harry Boyd Bair,	Holton, Jackson.
Wallace W. Baird,	Milford, (Riley.)
Annie Florence Baker,	Manhattan, Riley.
Paul Bammes,	Manhattan, Riley.
Frank Henry Barber,	Briggs, Geary.
Ella May Barnard,	Manhattan, Riley.
Silas Richard Barrett,	Lebo, Coffey.
Frank Seward Benedict,	Seward, Wilson.
Samuel Hargrove Bennett,	Plymouth, Lyon.
Charlotte Almira Berkey,	Cleveland, *Missouri.*
Charles Dallas Blachly,	Leonardville, Riley.
Hayes Blair,	Alida, Geary.
Zina Lay Bliss,	McPherson, McPherson.
William C. Block,	Skiddy, Morris.
Albert Elwood Branscom,	Industry, Clay.
George Wallace Brewer,	Waverly, Coffey.
Bettie Briggs,	Briggs, Geary.
Leon Broquet,	Manhattan, Riley.
Ben Remenyi Brown,	Manhattan, Riley.
Arthur Kinney Browning,	Lincoln Center, Lincoln.
David S. Burgess,	Louisville, Pottawatomie.
Daniel James Burke,	Reading, Lyon.
Tom Melancthon Cannon,	White Eagle, *Oklahoma.*
Anna Carey,	Belleville, Republic.
Cora Louisa Carleton,	Manhattan, Riley.
Henry Leroy Carter,	Numa, Butler.
Roy M. Cazier,	Burlingame, Osage.
Homer Lee Channell,	Hartford, Lyon.
Louis Marion Chase,	Hoyt, Jackson.
Isaac Newton Chilcott,	Mankato, Jewell.
Frederick Waldemar Christensen,	Mariadahl, (Riley.)
Charles Howard Clark,	Kinsley, Edwards.
Ezra James Clark,	Manhattan, Riley.
Ernest Marsden Clark,	Garlington, Franklin.
Lloyd Melton Clark,	Harper, Harper.

Name.	*Post-office and County (or State).*
Blanche Coggswell,	Grafton, Chautauqua.
Weltha Myrtle Cole,	Wauneta, Chautauqua.
Ralph W. Collins,	Wellsville, Franklin.
Albert B. Conner,	New Lancaster, Miami.
Arthur Roy Cook,	De Soto, Johnson.
Ernest Mansel Cook,	Oakley, Logan.
Fred Cook,	Junction City, Geary.
Faith Adella Cooper,	Keats, Riley.
Charles Maclain Correll,	Manhattan, Riley.
Amos Luther Cottrell,	Wabaunsee, Wabaunsee.
Frank Andrew Craik,	Oketo, Marshall.
Arestes Alden Crandall,	Jewell, Jewell.
Karl William Crawford,	Columbus, Cherokee.
John Francis Crowl,	Chino, *California.*
William Clarence Crowl,	Chino, *California.*
Albert Russell Crozier,	Burdett, Pawnee.
Mary Elizabeth Crum,	Stockdale, Riley.
Amanda Culp,	Leavenworth, Leavenworth.
Pearl Hoff Cunningham,	Manhattan, Riley.
Jennie Maude Currie,	Manhattan, Riley.
John William Cushnie,	Baker, Brown.
Fannie Rachel Ellen Dale,	Manhattan, Riley.
Cyrus Walter Dalrymple,	Renfrow, Grant.
Elliott Perie Daniels,	Birmingham, Jackson.
Joe Robert Davidson,	Agricola, Coffey.
Mary Ann Davies,	Bala, Riley.
Sarah Emily Davies,	Bala, Riley.
Clara Davis,	Spring Hill, Johnson.
Laura Arminta DeArmond,	Lincoln, Lincoln.
Robert William DeArmond,	Lincoln, Lincoln.
Samuel Christy Deeds,	Lincoln, Lincoln,
Orlando Ross Deputy,	Riley, Riley.
Harry Leroy Dern,	Kingman, Kingman.
Benjamin Walker Dial,	Cleburne, Riley.
Grace Dial,	Stockdale, Pottawatomie.
David C. Dodds,	Idana, Clay.
Charles Madison Drown,	Manhattan, Riley.
Walter Dimmick Duffy,	Manhattan, Riley.
Elsie Porter Dunaway,	Manhattan, Riley.
Nellie Edna Dyer,	Abilene, Dickinson.
Charles Eastman,	Ogden, Riley.
Robert Edward Eastman,	Bloomington, Osborne.
Henry Camden Edelblute,	Keats, Riley.
Jennie Edelblute,	Keats, Riley.
Charles Ross Edwards,	Phillipsburg, Phillips.
Alonzo Lawrence Eidson,	West Plains, Meade.
Emma Mary Eikenhorst,	Manhattan, Riley.
Otto H. Elling,	North Cedar, Jefferson.
Robert Alexander Esdon,	Olsburg, Pottawatomie.
Brownlee Becker Faris,	Kanopolis, Ellsworth.
Mark Faris,	Denison, Jackson.

Name.	*Post-office and County (or State).*
Arthur Medworth Ferguson,	Burlington, Coffey.
Louis Julius A. Fink,	Hymer, Chase.
William Barrett Finley,	Mortimer, Labette.
Herbert James Finley,	Manhattan, Riley.
James Harvey Fleming,	Block, Miami.
Mary Flynn,	Mayetta, Jackson.
Lottie Blanche Forsythe,	Dwight, Morris.
Frank W. Foster,	Clifton, Clay.
Ernst Christian Gasser,	Neosho, *Missouri.*
Lizzie Gentes,	Council Grove, Morris.
Alexander R. Gibb,	Hymer, Chase.
Ira Milton Girton,	Minneapolis, Ottawa.
Thomas Michael Gleason,	Briggs, Geary.
Harry Senis Goddard,	Vera, Wabaunsee.
George Ogden Greene,	Lincoln, Lincoln.
Augustus Wellington Greenfield,	Overbrook, Osage.
George Grubb,	Netawaka, Jackson.
Jack William Gyles,	Dodge City, Ford.
Hermann Haffner,	Junction City, Geary.
Victor Charles Haggman,	Kackley, Republic.
William Lesley Hanlon,	Orie, Sumner.
Hakon Hansen,	Guy, Sheridan.
Gustaf William Hanson,	Marquette, McPherson.
Gertrude Hardy,	Manhattan, Riley.
James William Harner,	Manhattan, Riley.
Hugh Harrold,	Manhattan, Riley.
Edward Marciene Hartmann,	Denver, *Illinois.*
Lillian Estelle Hathaway,	Grant, Riley.
Harry Haub,	Whiting, Johnson.
Orlo Bertie Haven,	Belleville, Republic.
Charles Russell Haymond,	Burdett, Pawnee.
Mamie Eva Helder,	Manhattan, Riley.
Harry Payson Hess,	Manhattan, Riley.
Anna Amelia Higginbotham,	Erwin, *Oklahoma.*
Josie Higginbotham,	Erwin, *Oklahoma.*
Louis Gardner Hill,	Phillipsburg, Phillips.
Francis Marion Hoag,	Brookville, Saline.
Karl William Hofer,	Manhattan, Riley.
Walter Christian Hoffman,	Enterprise, Dickinson.
Hartley Bowen Holroyd,	Manhattan, Riley.
Edward Wilfred House,	Manhattan, Riley.
Ada Belle How,	Manhattan, Riley.
Floyd James Howard,	Manhattan, Riley.
Minnie Howell,	Manhattan, Riley.
James Henry Howey,	Topeka, Shawnee.
Edith Huntress,	Manhattan, Riley.
Alexander Hutchison,	Arispie, Pottawatomie.
Edgar Ingraham.	Industry, Clay.
Clara Jaedicke,	Hanover, Washington.
Henry Johnson,	Oskaloosa, Jefferson.
Joseph Johnson,	Kackley, Republic.

Name.	*Post-office and County (or State).*
Merton Raymond Johnson,	Olsburg, Pottawatomie.
Louis Berton Jolley,	Manhattan, Riley.
Albert Kiene,	Valencia, Shawnee.
James Harry King,	Lincoln, Lincoln.
Ina Bertha Kneeland,	Manhattan, Riley.
Fred Carl Kruger,	Pfeifer, Ellis.
Walter Fisk Lawry,	Hollis, Cloud.
Raymond George Lawry,	Hollis, Cloud.
Arthur Moore Lee,	Manhattan, Riley.
John Albert Lee,	Polo, *Oklahoma.*
Charles Henry Lehmkuhl,	Muscotah, Atchison.
William Amos Lesley,	Culver, Ottawa.
Emma Lewelen,	Cedarvale, Chautauqua.
Charles Curtis Livingston,	Abilene, Dickinson.
Erma Elizabeth Locke,	Riley, Riley.
Samuel Berton McAninch,	Manhattan, Riley.
Annie Laura McClellan,	Westgate, (Riley.)
Bertha McCreary,	Manhattan, Riley.
N. Ollie McCurry,	Milo, Lincoln.
Charles McDonald,	Manhattan, Riley.
Edward Purcell McDowell,	Manhattan, Riley.
Rufus Alexander McEathron,	Garlington, Franklin.
Mary Lois McHugh,	Manhattan, Riley.
Charles William McKeage,	Hoyt, Jackson.
Mary Agnes McKean,	Grant, Riley.
Roland McKee,	Marysville, Marshall.
Madge Ruth McKeen,	Manhattan, Riley.
Lee McLaren,	Altoona, Wilson.
Nettie McLaren,	Altoona, Wilson.
Leonard Glen Manlove,	Manhattan, Riley.
Cora Seat Manley,	Council Grove, Morris.
Maggie Vickers Manley,	Council Grove, Morris.
William Turner Mann,	Denison, Jackson.
Emma Augusta Marksheffle,	Manhattan, Riley.
Simon Joseph Meier,	Grinnell, Gove.
Thomas Casper Melbert,	Gypsum City, Saline.
Elpha Fredaricka Meyer,	Menager, Wyandotte.
William Elmer Miller,	Potter, *Oklahoma.*
John Rutherford Minis,	Manhattan, Riley.
William Sylvester Mize,	Olathe, Johnson.
Charles Dudley Montgomery,	Cedar Point, Chase.
Clarence William Morgan,	Hillside, Phillips.
Eugene Lawrence Morgan,	Hillside, Phillips.
Arthur Guy Moyer,	Princeton, Franklin.
Dorothy Myers,	Manhattan, Riley.
Lissa Alameda Myers,	Belleville, Republic.
Charles Robert Nelson,	Kackley, Republic.
James Lawrence Nelson,	St. Louis, *Missouri.*
Robert Christian Nelson,	Greenleaf, Washington.
George Edgar Newton,	Fact, Clay.
Fred Cranston Nicholson,	Cormack, Wichita.

Name.	*Post-office and County (or State).*
Oliver Orin Ogborn,	White Rock, Republic.
Anna Olson,	Mullinville, Kiowa.
Mats Seth Olson,	Garrison, Pottawatomie.
Andrew Edward Oman,	Walsburg, Riley.
Bessie Elizabeth Orr,	Riley, Riley.
George Washington Owens,	Alma, Wabaunsee.
Charles Martin Paige,	Manhattan, Riley.
Joseph Loyd Pancake,	Scott City, Scott.
Albert William Parrack,	Riley, Riley.
William Harry Patterson,	Pawnee, Leavenworth.
Perley Hampton Paxton,	Portis, Smith.
Ella Emerson Peck,	Big Valley, *Texas.*
Ruthford Brockway Peck,	Oakland, Shawnee.
Jesse Leroy Pelham,	San Luis Potosi, *Mexico.*
Edith Perkins,	Manhattan, Riley.
Eleanor Perkins,	Manhattan, Riley.
John Linn Perry,	Elba, Chase.
John Valentine Pettys,	Herndon, Rawlins.
Paul du Chaillu Piersol,	Randall, Jewell.
John Samuel Plum,	Baker, Brown.
Bryant Poole,	Briggs, Geary.
Pearl Jasper Porter,	North Topeka, Shawnee.
John Louis Postlethwaite,	Jewell, Jewell.
Leonard Poston,	Netawaka, Jackson.
Luther Eugene Potter,	Rose, Woodson.
Harry Pratt,	Museum, Sheridan.
Edwin Benton Purcell, jr.,	Manhattan, Riley.
Lewis Harper Rand,	Wabaunsee, Wabaunsee.
Abraham L. Ray,	Winfield, Cowley.
Rosa Minnie Ray,	Winfield, Cowley.
Claude Leroy Ream,	Gaylord, Smith.
Charles Edwin Reece,	May Day, Riley.
Minnie Blanche Reece,	May Day, Riley.
May Bell Rehfeld,	Manhattan, Riley.
Elmer Jacob Reichley,	Republic, Republic.
Alwina Theresea Remmele,	Manhattan, Riley.
Ernest A. Rhodes,	Arkansas City, Cowley.
Harry Paul Richards,	Manhattan, Riley.
Florence Rebecca Ritchie,	Manhattan, Riley.
Andrew Edward Robe,	Harris, Jackson.
Carroll Clyde Roberts,	Winfield, Cowley.
Elsie Mary Robinson,	Manhattan, Riley.
Albert Robison,	Yates Center, Woodson.
Earle Kyle Rogers,	Marion, Marion.
Frank Adelbert Root,	Gypsum City, Saline.
Alice May Ross,	Manhattan, Riley.
Lyman Bertrand Ross,	Manhattan, Riley.
Maude Ross,	Manhattan, Riley.
William Daniel Ross,	Manhattan, Riley.
Perry Rubart,	Junction City, Geary.
Louis Tenny Rumsey,	Council Grove, Morris.

Name.	*Post-office and County (or State).*
Allen Russell,	Sunset, Miami.
Fred Arthur Russell,	Paola, Miami.
Ethel May Salisbury,	Asherville, Mitchell.
Alvirtis Cantford Salkeld,	Manhattan, Riley.
Eugene Lafayette Sanborn,	Manhattan, Riley.
Mary Sandell,	Manhattan, Riley.
Claude Herbert Sanford,	Parkerville, Morris.
Charles Riley Sanford,	Milford, Geary.
William Stephen Sargent,	Riley, Riley.
Jessie Schick,	Scott City, Scott.
Frederick Louis Schneider,	Purcell, Doniphan.
Fred Schwaller,	Hays City, Ellis.
Charles A. Scott,	Westmoreland, Pottawatomie.
Robert Benjamin Sherwood,	Clay Center, Clay.
Sadie Sherwood,	Clay Center, Clay.
Victor Ray Shintaffer,	Fairview, Brown.
Cora May Shull,	Manhattan, Riley.
Anna Augusta Siegrist,	Manhattan, Riley.
Ed. S. Sittel,	McAlester, *Indian Territory.*
John T. Skinner,	Neodesha, Wilson.
Anna Louisa Smith,	Ottumwa, Coffey.
Andrew Jarvis Snyder,	Pottawatomie, Coffey.
Charles Chester Sowell,	Vassar, Osage.
Maude Eupheme Spaulding,	Wamego, Pottawatomie.
Clara Spilman,	Manhattan, Riley.
Amelia Spohr,	Manhattan, Riley.
Leroy Stafford,	Republic, Republic.
John William Stansbury.	Newtonia, *Missouri.*
John Leonard Stein,	Gypsum, Saline.
Mabel Stewart,	Manhattan, Riley.
Blanche Elsie Stump,	Manhattan, Riley.
Mary Rebecca Sweaney,	Olsburg, Pottawatomie.
Benjamin Swenson,	Dwight, (Geary.)
Cora Edith Swingle,	Manhattan, Riley.
Dean Brett Swingle,	Manhattan, Riley.
Arthur C. Tannehill,	Wakefield, Clay.
Barton Thompson,	Garrison, Pottawatomie.
Carl Thurber,	Twin Mound, Douglas.
Emma Elizabeth Tilton,	Detroit, Dickinson.
Myrtie Lucy Toothaker,	Wheaton, Pottawatomie.
Ira Toothaker,	Wheaton, Pottawatomie.
Nell Towers,	Manhattan, Riley.
Laura Helen Trumbull,	Manhattan, Riley.
William Samuel Turley,	La Junta, *Colorado.*
Ernest Charles Umdenstock,	Arvonia, Osage.
Philip Farrand Van Everen,	Manhattan, Riley.
Joseph Culver Van Orsdel,	Waterville, Marshall.
Grace Voiles,	Manhattan, Riley.
Luther Watts Waldraven,	Winkler, Riley.
Bolivar Kernest Walters,	Manhattan, Riley.
Carrie Emma Walters,	Riley, Riley.

Name.	*Post-office and County (or State).*
Harvey Augustus Washburn,	Riley, Riley.
Henry Russell Webster,	Yates Center, Woodson.
Albert E. Welsh,	Aulne, Marion.
Barbara Welter,	Myers Valley, Pottawatomie.
Lester Monroe Werts,	Denison, (Jefferson.)
Ernest Weyer,	Seneca, Nemaha.
Otto Christian Weyer,	Baileyville, Nemaha.
Cyrus Edward Wilkins,	Vilas, Wilson.
George David Williams,	McDonald, Rawlins.
George Edwin Williams,	Hoganville, Graham.
Nellie Mitchell Williams,	Springside, Pottawatomie.
David G. Wilson,	Frankfort, Marshall.
Nellie M. Winter,	Manhattan, Riley.
Myrl Wolfe,	Little River, Rice.
John Milton Yard,	Smith Center, Smith.
Zeno Zabriskie,	Parkerville, Morris.
Lilly Maud Zimmerman,	Moray, Doniphan.

PREPARATORY.

Thomas Stevens Adams,	Terryton, Finney.
Amy Barrett,	Lebo, Coffey.
William Butler Bobbitt,	Tulsa, *Indian Territory.*
Charles Henry Bowers,	Crescent, Kiowa.
John James Bowers,	Crescent, Kiowa.
John H. Burkholder,	Holland, Dickinson.
Lizzie Burkholder,	Holland, Dickinson.
Price E. Burkholder,	Abilene, Dickinson.
Grace Elizabeth Cherry,	Holton, Jackson.
Tillie Albertina Clasen,	Keith, *Oklahoma.*
Frank Burdette Conner,	New Lancaster, Miami.
Almon Cunningham,	Scottsville, Mitchell.
Amiel Deere,	Olsburg, Pottawatomie.
Joseph F. Demain,	Wendell, Edwards.
Orlando Ross Deputy,	Riley, Riley.
Carl Hjalmer Erickson,	Marquette, McPherson.
Bertram J. Finch,	Waverly, Coffey.
Ben Ganung,	Manhattan, Riley.
Benton Garrison,	Utopia, Greenwood.
Watt Glenn,	Block, Miami.
Arthur H. Green,	Industry, Clay.
Charles Leonard Greer,	Haverhill, Butler.
Delbert Phocian Guy,	Syracuse, Hamilton.
Francis Harrold,	Columbiana, *Ohio.*
John Adams Haulenbeck,	Manhattan, Riley.
Sattire Henderson,	Leavenworth, Leavenworth.
Edward Edgar Hood,	Holton, Jackson.
Delbert Humphries,	Manhattan, Riley.
Fred Humphries,*	Williamstown, Jefferson.
William Merton Humphries,*	Williamstown, Jefferson.

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* Expelled.

Name.	*Post-office and County (or State).*
Winfield Emerson Jackson,	New Lancaster, Miami.
Wallace W. Jaquins,	Winfield, Cowley.
Grace Alberta Kapp,	Abilene, Dickinson.
Herman Alvin Kassebaum,	Industry, Clay.
George Thomas Kirchner,	Herndon, Rawlins.
Conrad August Kruger,	Pfeifer, Ellis.
William John Leith,	Ellsworth, Ellsworth.
Charles E. Lindeman,	Assaria, Saline.
Marion Rhosco Little,	Norwood, *Missouri.*
Richard Lefroy Lyon,	Manhattan, Riley.
Ada McCall,	Culver, Ottawa.
Seba McCall,	Culver, Ottawa.
Jacob Melvin McCreary,	Holton, Jackson.
Susie May McEathron,	Garlington, Franklin.
Adolph William Maas,	Alma, Wabaunsee.
Fred Charles Maas,	Alma, Wabaunsee.
Ole B. Madison,	Osborne, Osborne.
William Matthias,	Huron, Atchison.
Charles George Moyer,	North Topeka, Shawnee.
Frank Myer,	Morrill, Brown.
George Nelson,	St. Louis, *Missouri.*
Thomas Parrack,	Riley, Riley.
Emory Plumb,	Abilene, Dickinson.
Price Lewious Pritchard,	Manhattan, Riley.
John Thomas Quantic,	Keats, Riley.
George Clarence Rathbone,	Manhattan, Riley.
Charles Rezac,	Holy Cross, Pottawatomie.
Joshua Rudolph,	Milford, Geary.
Fred Marten Seekamp,	Mulvane, Sumner.
Lawrence Shearer,	Cawker City, Mitchell.
Perry A. Sherman,	Keats, Riley.
Edward Lincoln Sherwood,	Clay Center, Clay.
Arthur V. Snodgrass,	Little River, Rice.
William Tieking,	Myers Valley, Pottawatomie.
Don Towler,	North Topeka, Shawnee.
Forrest Warren,	Vermillion, Marshall.
Charles Clarence Winsler,	Abilene, Dickinson.
Art Wyland,	De Soto, Johnson.

SPECIAL STUDENTS.

Floreta Cook,	Junction City, Geary.
Dora Stella Dutton,	Manhattan, Riley.
Ross Long,	Manhattan, Riley.
Raymond Haines Pond,	Topeka, Shawnee.
George B. Rogers,	Green, Clay.
Robert Bruce Spilman,	Manhattan, Riley.

SUMMARY.

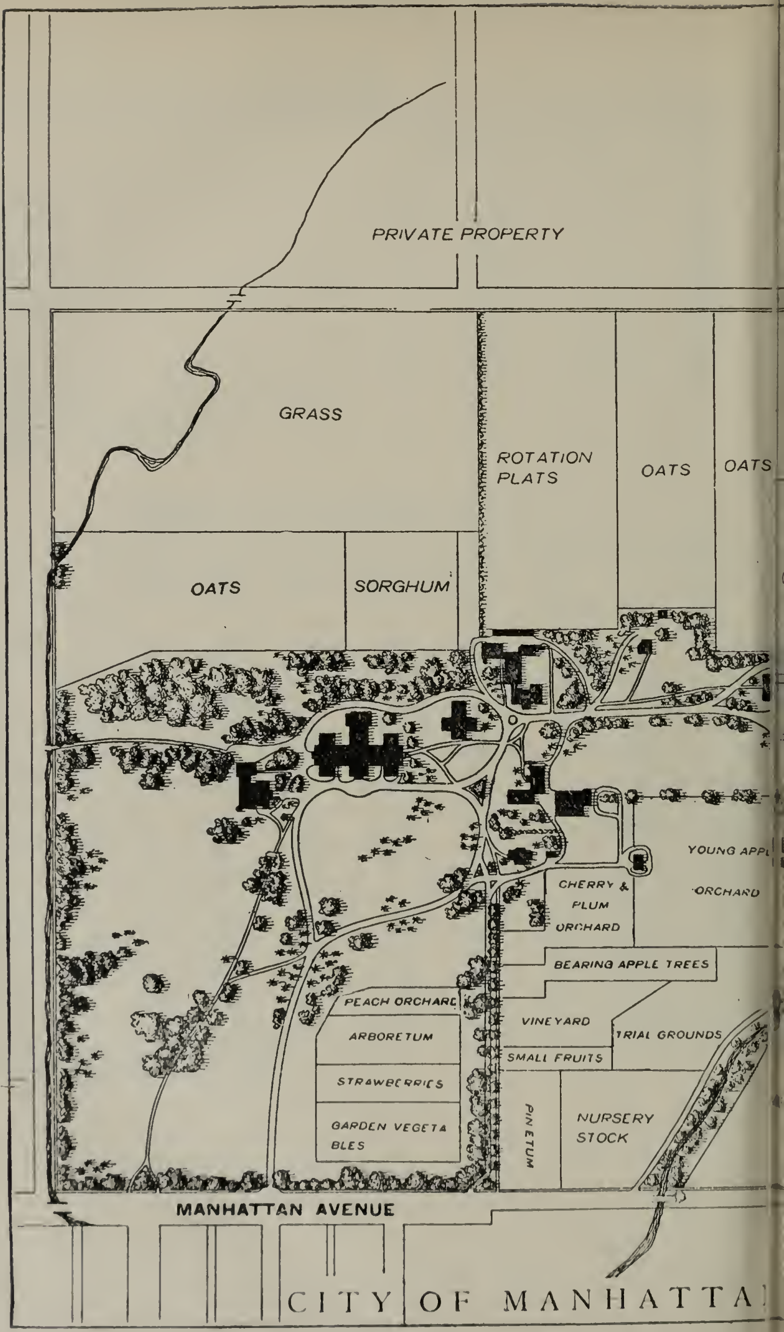
	Gentlemen.	*Ladies.*
Post-graduate	20	26
Fourth year	35	27
Third year	38	31
Second year	106	57
First year	228	93
Preparatory	59	8
Special	4	2
Totals	490	244

From 76 counties of Kansas, 698.
From 13 other states, 36.
Applicants not enrolled, 10.

RECORD OF ATTENDANCE, 1879-'96.

COLLEGE YEAR.	*Special.*	*First year.*	*Second year.*	*Third year.*	*Fourth year.*	*Post-graduate.*	*Total.*
1878-79	.....	90	89	16	12	....	207
1879-80 †	.....	167	61	35	11	2	276
1880-81 *	.....	184	48	24	9	2	267
1881-82	.....	232	50	19	11	....	312
1882-83	.....	245	60	30	12	....	347
1883-84	.....	257	92	26	18	2	395
1884-85	.....	274	71	36	16	5	402
1885-86	.....	274	91	35	24	4	428
1886-87	.....	312	96	44	24	7	485
1887-88	.....	305	92	46	27	2	472
1888-89 †	.....	266	103	41	28	7	445
1889-90	.....	307	105	63	28	11	514
1890-91 †	.....	343	135	50	53	12	593
1891-92	.....	336	139	62	37	10	584
1892-93	.....	339	110	66	43	29	587
1893-94	.....	275	141	72	42	25	555
1894-95	5	276	108	89	64	30	572
1895-96	3	353	121	67	71	32	647
1896-97	6	388	163	69	62	46	734

* Course strengthened.
† Requirement for admittance raised.


PRIVATE PROPERTY
GRASS
ROTATION PLATS
OATS
OATS
OATS
SORGHUM
YOUNG APPL
ORCHARD
CHERRY & PLUM ORCHARD
BEARING APPLE TREES
PEACH ORCHARD
ARBORETUM
VINEYARD
TRIAL GROUNDS
SMALL FRUITS
STRAWBERRIES
GARDEN VEGETABLES
PINETUM
NURSERY STOCK
MANHATTAN AVENUE
CITY OF MANHATTA

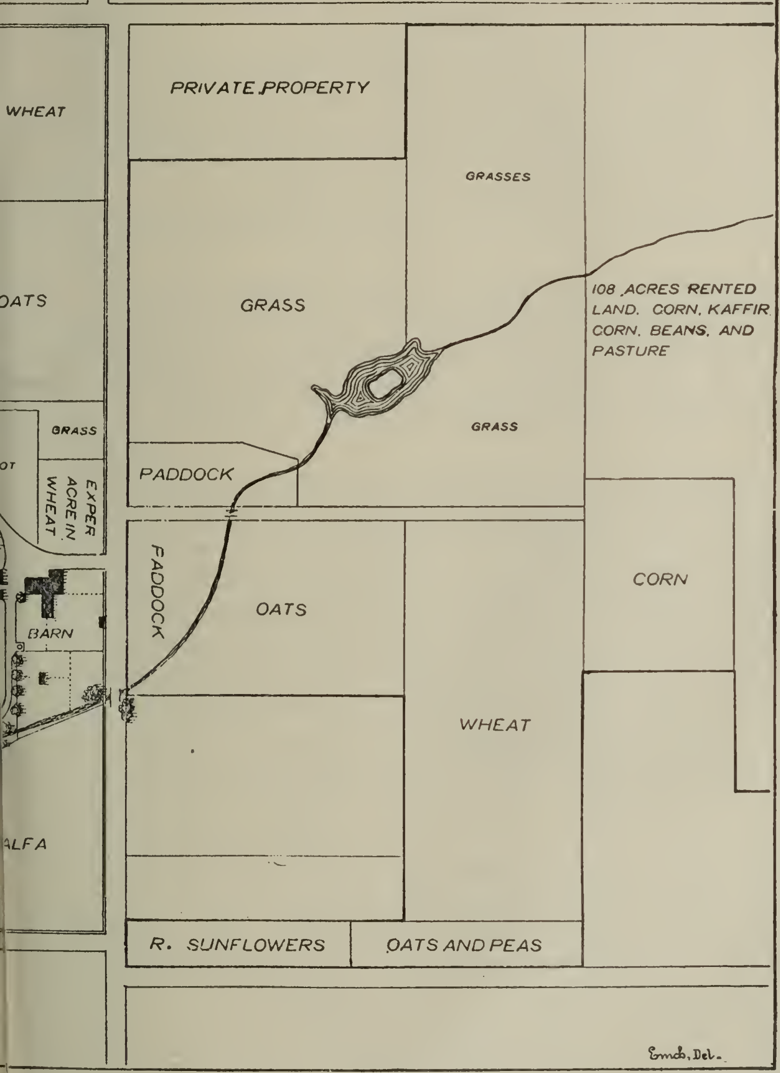
GROUNDS, EXPERIMENTAL FIELDS, AND PLANTATIONS

OF THE

Kansas State Agricultural College

220 ACRES

The College uses 200 acres not shown here.



Emch, Del.

History and Resources.

An act of Congress, approved July 2, 1862, gave to each state public lands to the amount of 30,000 acres for each of the senators and representatives in Congress according to the census of 1860, for the "endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Under this act, the state of Kansas received 82,313.53 acres of land, and, in 1863, established the State Agricultural College, by endowing with these lands Bluemont College, which had been erected two miles from Manhattan, under the auspices of the M. E. Church, but was presented to the state for the purpose named in the act of Congress.

In 1873 the College was reorganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 219 acres, one mile from the city of Manhattan. On this fine location the state has provided buildings valued at $222,000; of these a description is given elsewhere. The farm and grounds, furniture, stock, and other illustrative apparatus, are valued at $185,000. The present value of buildings, grounds, apparatus, etc., is almost equal to the sum of all appropriations by the state. Nearly all the lands have been sold, giving a fund of $502,344.25, which is by law invested in bonds, the interest alone being used for the current expenses of the college.

The annual income from the endowment fund — about $28,000 — is supplemented by an appropriation under an act of Congress approved August 30, 1890, of $15,000 for 1890, and a sum increasing each year by $1,000 until the annual amount shall be $25,000. This fund, now $23,000, is "to be applied only to instruction in agriculture, the mechanic arts and the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." "No portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings."

All the expense of instruction is thus provided for, and the state is left to erect and maintain the necessary buildings and meet expenses in management of the funds.

Under an act of Congress approved March 7, 1887, the College receives, by annual appropriations in Congress, $15,000 a year for the maintenance of an experiment station, "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The property of the Station, including a building erected especially for its use, amounts to more than $10,500.

Grounds and Buildings.

The College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing towards the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted, according to the design of a professional landscape gardener, while well-graveled drives and good walks lead to the various buildings. All of these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and all are heated by steam or hot water. A complete system of sewerage has been provided. The buildings stand as indicated in the plat accompanying the following description:

College, 152 x 250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices, reception room, cloak-rooms, studies, chapel, library, reading-room, kitchen laboratory and dairy, sewing room, printing office, and 14 class-rooms.

Chemical laboratory, one story, 26 x 90 and 46 x 75 feet of floor space, in form of a cross. It contains seven rooms, occupied by the department of chemistry and mineralogy.

Mechanics hall, 39 x 103 feet, two stories, and 40 x 80 feet, one story, occupied by wood and iron shops, finishing shop, class-room, music rooms. A foundry, 32 x 42 feet, is attached.

A central steam plant furnishes heat and power to the buildings.

Horticultural hall, 32 x 80 feet, one story and cellar, having cabinet room, class-room, and storage, with greenhouse attached.

Horticultural laboratory, with six propagating houses attached.

Armory and veterinary laboratory, 46 x 96 feet, two stories. This building, which has served many purposes, is now fitted for an armory and drill room below, and for class-room, laboratory and veterinary museum for the department of physiology and veterinary science above.

Library and agricultural science hall, 100 x 140 feet, three and four stories. This building provides permanent quarters for the library, with ample reading-room; class-rooms, laboratories, and cabinet room for zoölogy, entomology, and botany; a class-room in history; and suitable rooms for various College societies.

Domestic science hall, now being built, 84 x 70, two stories and basement. The first story and the basement will be occupied by the department of household economics, and the second by the department of sewing. The building will be completed before the beginning of the winter term.

The farm barn is a double but connected stone structure, 50 x 75 feet and 48 x 96 feet, with an addition of sheds and experimental pens 40 x 50 feet. A basement, having stables for 75 head of cattle, silos, engine-room, and granaries, underlies the entire structure.

The horticultural barn is a stone building, containing storeroom, granary, and stables for several horses.

The foundries, lumber house, implement house, piggery and various outbuildings are of wood.

One stone dwelling, occupied by the professor of agriculture, and one frame dwelling, occupied by the foreman of the farm.

LIBRARY.

The library consists of 17,487 bound volumes and about 5,500 pamphlets, including 949 volumes belonging to the Experiment Station, and is valued at $32,500. It has been selected mainly with a view to supplementing the class-room instruction in the various departments. All the books are indexed in a card catalogue, so that the resources of the library upon any subject may be readily learned. All students have free access to the bookshelves, and may draw the books for home use, under simple and most liberal regulations.

The College subscribes for the leading literary, scientific and agricultural journals; while the principal daily and weekly papers of Kansas, and many from other states, are received in exchange for the College publications. All these are kept on file for the use of students and Faculty.

The College has been designated as a depository of United States public documents for the fifth congressional district of Kansas, and 2,002 volumes have already been received on this account.

The library is open daily, except on legal holidays, from 7 A. M. to 6 P. M. The librarian or the assistant is in constant attendance at these hours to assist those who use the books.

An approximate estimate of the number of books, including public reports and bound periodicals, by classes, is as shown on page 29.

Classes.	*Vols.*	*Classes.*	*Vols.*
Agriculture	2,130	English language and literature	950
Horticulture	510	Logic and philosophy	175
Mechanics and engineering	470	General science	660
Mathematics and astronomy	250	Geography and travels	230
Physics and meteorology	275	Dictionaries and cyclopedias	170
Chemistry and mineralogy	450	Education	330
Geology	290	Law	175
Botany	752	Administrative reports	340
Zoology and entomology	540	Public documents on deposit	2,000
Biology	100	Fiction	450
Medical and veterinary science	340	Poetry	170
Military science	85	Religion and morals	490
Domestic science	110	Fine arts	185
Economic science	460	Bound magazines	1,330
History and political science	1,405	Music	40
Printing	55	History of industry	190
Industrial art and design	160	Miscellaneous	100

Objects.

This College now accomplishes the objects of its endowment in several ways:

First, It gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second, It teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, botany, entomology, zoölogy and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science; and all are enforced by actual experiment.

Third, It trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household departments is made a part of the general education for usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth, It strives to increase our experimental knowledge of agriculture and horticulture. The provision for extensive and accurate researches, made by establishing the Experiment Station as a distinct department of the College, offers assurance of more definite results than can be obtained by ordinary methods. The professors of agriculture, horticulture, chemistry, entomology, botany, and veterinary science, together with the President of the College, form the Experiment Station Council, by authority of which experiments are undertaken and carried on in the several departments, under the special supervision of the professors. These touch "the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses for forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable." The bulletins of the Station, issued at least as often as once in three months, and amounting to not less than 40,000 copies during the year, are sent, according to law, free of postage, to all newspapers in the state, and "to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." Correspondence with reference to bulletins and experiments is welcomed, and may be addressed to the several members of the Council.

Fifth, It seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose, farmers' institutes have been organized in about 60 counties of the state, in which from two to four members of the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers and their families. These institutes, held for the past 15 years, have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented. Members of the Faculty are also prominently connected with the state associations for the promotion of agriculture, horticulture, the natural sciences, and education in general. Correspondence as to farmers' institutes or any questions of practical interest in agriculture or related sciences is desired.

Sixth, It seeks to awaken the agricultural and industrial classes to a realization of the fact that their prosperity and progress depend not alone upon their efficiency as producers, but in part as well upon the operation of the principles of distribution and exchange; overproduction and poverty often going hand in hand.

The *Industrialist*, published weekly, and edited by Faculty and students, gives a wide circulation to matters of interest in the College.

Methods.

The necessity for so adjusting various branches of a course of study that there shall be as little waste as possible in acquiring both information and discipline is felt by every teacher. Such a course is not designed to be absolutely inflexible, but to guide the judgment into some definite line of progress from which no mere whim shall turn a student aside. Students in irregular courses are expected to take the equivalent for the required duties of the term; variations from this rule can be made only with the consent of the Faculty.

Parallel courses are offered to both sexes, with such differences as their necessities seem to call for. The following gives the general scope of the two, but fuller explanations are found under "Outline of Instruction":

COURSE OF STUDY.

[Numerals denote number of class hours per week. When no work outside of class is required, italics are used.]

FIRST YEAR.

Fall Term....Algebra, 5.
14 weeks. English Analysis, 5.
Botany, 5.
Free-hand Drawing, 3.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 4.

Winter Term..Algebra, 5.
12 weeks. English Composition, 5.
Bookkeeping, one-half term, 5. Commercial Law, 1.
Geometrical Drawing, one-half term, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 3.

Spring Term..Algebra, 5.
11 weeks. English Structure, 5.
Elementary Physics, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 5.

SECOND YEAR.

Fall Term....Geometry, 5.
14 weeks. Horticulture, 5.
Inorganic Chemistry, 5. *Laboratory work*, 2.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 4.

Winter Term..Geometry, one-half term, 5.
12 weeks. Projection Drawing, one-half term, 5.
Agriculture, for young men, 5.
Household Economy, for young women, 5.
Organic Chemistry, one-half term, 5.
U. S. History, one-half term, 5.
Military Science, one-half term, 2.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 3.

Spring Term..Trigonometry and Surveying, 5.
11 weeks. Entomology, 5.
Analytical Chemistry, 10.
Military Science, 2.
Rhetoricals, 1.
Industrial, 5.
Military Drill, 5.

THIRD YEAR.

Fall Term....Descriptive Geometry, 10 weeks, 5.
14 weeks. General History, 5.
Anatomy and Physiology, Zoölogy, 5.
Chemistry of Foods, 4 weeks, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Winter Term..Mechanics, 5.
12 weeks. Civics, 5.
Geology, 5.
Drafting, 3.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Spring Term..Principles of Economic Science, 5.
11 weeks. Rhetoric, 5.
Agricultural Chemistry, 5, or Analytical Geometry, 5.
Perspective and *Sketching*, 4.
Rhetoricals, 1.
Industrial (*Drafting Practice*), 5.
Military Drill, optional.

FOURTH YEAR.

Farmers' Course.

Fall Term....Physics and Meteorology, 5.
14 weeks. Economic and Social Problems, 5.
Agriculture, 5.
Drafting, 4.
Rhetoricals, 1.
Farm and Garden Industrial, 5.
Military Drill, optional.

Winter Term..Physics, one-half term, 5.
12 weeks. Industrial History, one-half term, 5.
Psychology and Logic, 5.
English Literature, 5.
Botany, 2. *Laboratory*, 5.
Rhetoricals, 1.
Farm and Garden Industrial, 5.
Military Drill, optional.

Spring Term..Veterinary Science, 5.
11 weeks. Finance, 5.
Agriculture, 5.
Rhetoricals, 1.
Farm and Garden Industrial, 5.
Military Drill, optional.

Women's Course.

Fall Term....Physics and Meteorology, 5.
14 weeks. Economic and Social Problems, 5.
Hygiene, 5.
Drawing, 4.
Rhetoricals, 1.
Industrial, 5.

Winter Term..Physics, one-half term, 5.
12 weeks. Industrial History, one-half term, 5.
Psychology and Logic, 5.
English Literature, 5.
Botany. 2. *Laboratory*, 5.
Rhetoricals, 1.
Industrial, 5.

Spring Term..Floriculture, 5.
11 weeks. Finance, 5.
Literature, 5.
Rhetoricals, 1.
Industrial, 5.

Mechanics' Course.

Fall Term....Physics and Meteorology, 5.
14 weeks. Economic and Social Problems, 5.
Calculus, 5.
Materials of Construction, 4.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Winter Term..Physics, one-half term, 5.
12 weeks. Industrial History, one-half term, 5.
Psychology and Logic, 5.
English Literature, 5.
Advanced Descriptive Geometry, 2. *Problems*, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

Spring Term..Machine Designing, 5.
11 weeks. Finance, 5.
Mechanics of Machinery, 5.
Rhetoricals, 1.
Industrial, 5.
Military Drill, optional.

The following options will be allowed in the spring term of the fourth year: Horticulture against Agriculture; Architectural Designing and Architecture against Machine Designing and Mechanics of Machinery. Women may elect from the Farmers' or Mechanics' Course.

ELECTIVES IN EXTENDED COURSE.

(Subject to change.)

A number of the studies named below must be preceded by certain other studies. Consult the index to find the fuller information given under "Outline of Instruction."

Fall Term....Irrigation and Drainage, 2. Reference reading on feeding.
14 weeks. Fruit Culture, 5.
Origin of Cultivated Fruits and Vegetables, 5.
Vegetable Morphology and Ecology, 3.
Vegetable Physiology, 2.
German Reading, 2.
General Entomology, 5.
Systematic Entomology, 5.
Animal Morphology, 5.
Systematic Zoölogy, 5.
Contagious and Infectious Diseases of Animals, 5.
General Review of Human Anatomy, 5.
Advanced Inorganic Chemistry, 5.
Quantitative Chemical Analysis, 5.
Materials of Engineering, 5.
Applied Mechanics, 5.

Physics, 5.
Analytical Geometry, 5.
Heating, Ventilation, and Drainage, 5.
History of the Nineteenth Century, 5.
Railroad, Telegraph and City Monopolies, 5.
Hygiene, 5.
Foods for the Sick, 5.

Winter Term..Dairy Breeds and Dairying, 5.
12 weeks. Forestry, 5.
Greenhouse Construction and Management, 5.
Cryptogamic Botany, 5.
German Reading, 5.
General Entomology, continued, 5.
Systematic Entomology, continued, 5.
Animal Morphology, continued, Development, 5.
Systematic Zoölogy, special, 5.
Theory and Practice of Veterinary Medicine, 5.
Advanced Human Physiology, 5.
Advanced Inorganic Chemistry, continued, 5.
Quantitative Chemical Analysis, 5.
Physics, 5.
Historic Ornament, 5.
Architectural Details, 5.
Comparative Politics, 5.
Farm Mortgages and other Agricultural Problems, 5.
Bread, Meats, Salads, 5.

Spring Term..Grain and Forage Crops, 5.
11 weeks. Maintaining Soil Fertility, 2.
Vegetable Gardening, 5.
Ornamental Gardening, 5.
Systematic Botany, 3.
Economic Botany, 2.
German Reading, 5.
Entomological Methods, 5.
Economic Entomology, 5.
Zoölogical Distribution and Evolution, 5.
Comparative Anatomy and Physiology, 5.
Veterinary Materia Medica, and Surgery, 5.
Organic Chemistry, 5.
Quantitative Chemical Analysis, 5.
Physics, 5.
Steam-Engine Design, 5.
Measurement of Power, *Laboratory Practice*, 5.
Historic Ornament, 5.
Architectural Composition, 5.
Constitutional Law, 5.
Fire Insurance, Building and Loan Associations, and other Forms of Coöperation and Saving, 5.
General Cooking, 5.
Cake, Pastry, Dessert, 5.

INDUSTRIAL TRAINING.

Closely adjusted to the course of study is industrial training in several of the arts, to which each student is required to devote at least one hour a day. Among the lines of training, each student may select, with the approval of the Faculty, except in terms when special industries are required. Young men may have farming, gardening, and fruit-growing, woodwork and ironwork, or printing. Young women may take cooking, sewing, printing, floriculture, or music. The training in these departments is designed to be systematic and complete in each, so that a student following a single line diligently through the four-years course gains the essentials of a trade and a reasonable degree of skill. Those who wish only a general training in the arts can take shorter courses in several of them.

During the fourth year, young men taking the Farmers' Course will have their industrial in the farm, garden, and orchards. Young women take their industrial for one term of the first year in sewing, and for the winter and spring terms of the second year in the kitchen laboratory and dairy.

POST-GRADUATE COURSES.

Arrangements can be made for advanced study in the several departments at any time, and outlines of courses will be furnished on application. The electives of the Extended Course are open to graduates, and special opportunities will be given for investigation and research. Every facility for advancement in the several arts taught at the College will be afforded such students, though they are not required to pursue industrial training while in these courses.

DEGREES.

The degree of bachelor of science is conferred upon students who complete the full course of four years and sustain all the examinations. This degree entitles the holder to credit for studies pursued in any application for state teacher's certificate. (See Laws of 1893.)

Students who extend the course one full year will receive mention on the diploma of special proficiency in those lines of study which they have pursued as an elective for not less than three terms.

The degree of master of science is conferred in course upon graduates who comply with the following conditions :

1. Upon candidates resident at least one year, the degree may be conferred at the end of a two-years course ; upon non-resident candidates, the degree may be conferred at the end of a three-years course; upon candidates who have taken a five-years Extended Course or its equivalent, it may be conferred at the end of a one-year post-

graduate course. These courses must be outlined by, or be acceptable to, the Faculty.

2. Each candidate shall furnish evidence satisfactory to the Faculty of proficiency in one of the following arts: Agriculture, horticulture, engineering, architecture, designing, domestic economy; and in a science or group of sciences related thereto.

Either a science or an art may constitute the student's major study; in either case his studies are expected to bear upon the distinctive work of the institution.

3. Each candidate must present for consideration by the Faculty a satisfactory thesis, involving original research in the line of his major study, and shall deposit a perfect copy in the College library.

4. Application to the Faculty for sanction of the lines of study and research should be made as early as the 1st day of November.

5. The subject of the thesis must be settled upon as soon as the 1st day of January preceding the commencement at which the degree is expected.

In a resident post-graduate course of study, as provided for by rule 1, the work required shall be the equivalent of that necessary to pursue three full studies, the time in the aggregate to be divided approximately into three equivalents, two to the major and one to the minor study.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of master of science may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

2. His post-graduate study shall have been in line with that required of graduates of this College, as published in our catalogue.

3. He must make application for the degree on or before the 1st day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study. the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1, an abstract of the thesis must be submitted to the Faculty.

5. Before May 15, the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

SPECIAL COURSES.

Persons of suitable age or advancement, who desire to pursue such branches of study as are most directly related to agriculture or other industries, may select such studies under the advice of the Faculty.

Outline of Instruction.

Agriculture.

SECOND YEAR—*Winter Term.*—History of agriculture, showing the successive steps by which the art has attained its present position. History and characteristics of breeds: Their adaptation to the varying conditions of soil, climate, and situation; study of the forms of animals, as shown by the different breeds belonging to the College; the relation of stock-raising to general farming. Cultivation of hoed crops; management of corn and roots with reference to stock feeding, and the growth of the finer grains. The growth of the tame grasses in Kansas: The best sorts for the state, and their management, as shown by experience upon the College farm and elsewhere. Implements of simple tillage: Mechanical principles involved in their construction. Application of labor. Draft: Different adjustments as affecting draft. Plows for soil and subsoil. Drainage: Soils that need drainage; how to lay out a system of drains.

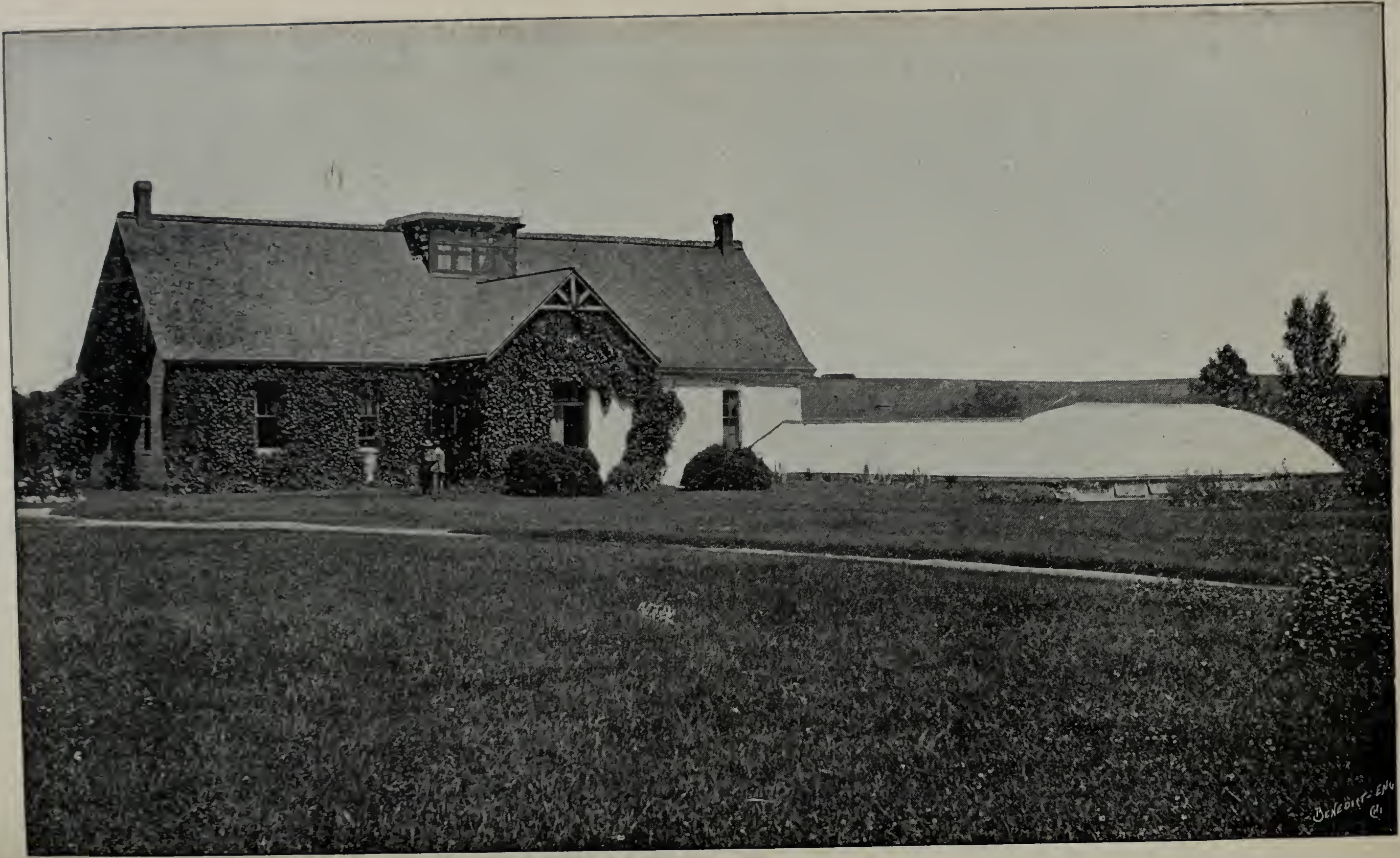
FOURTH YEAR—*Fall Term.*—General principles governing the development of domestic animals: The laws of heredity—of normal, abnormal and acquired characters; atavism; correlation in the development of parts; in-and-in breeding and crossbreeding; influences affecting fecundity. The selection and arrangement of the farm with reference to the system to be pursued. Rotation of crops: General advantages of a rotation; the best rotation for the distribution of labor, production of manure, and extermination of weeds. Planning farm buildings—barns, piggeries, and stables. Manure: How best saved and applied; composting; commercial fertilizers. Agricultural experiments; field and feeding experiments. Stock feeding and meat production: Compounding rations, stall feeding. Soiling.

FOURTH YEAR—*Spring Term.*—This course will be given in 1897–'98 for the first time, and will be an alternative with horticulture in the Farmers' Course. Its nature will be determined by the professor in charge.

EXTENDED COURSE—*Fall Term.*— Elective work may be taken two hours a week in irrigation and drainage, with reference reading on these subjects and on feeding.

Winter Term.—Elective work is offered in dairying, comprising a review of dairy breeds, management of dairy cattle and milk pro-

STUDENTS AT WORK IN THE GARDENS.



AGRICULTURAL HALL AND GREENHOUSE.

duction, and the manufacture of butter and cheese. Recitations, five hours a week.

Spring Term.— Elective work is offered as follows: (1) Lectures and recitations, five hours weekly, on grain crops and forage crops, with reference reading on these subjects. (2) Lectures and recitations, two hours weekly, on maintaining soil fertility and the application of manures, and reference reading on these subjects; but this subject must be preceded by the required agriculture, agricultural chemistry, and vegetable physiology.

Farm Work.— Young men electing the Farmers' Course in the fourth year take their industrial either on the farm or in the garden throughout the year. The work is made instructive, and hence constitutes a part of the student's education. Aside from this required work, students are allowed to work on the farm at all times when help is needed, and are compensated therefor, the maximum remuneration during term time being 10 cents an hour, and during vacation 12½ cents, and so fully do they avail themselves of this privilege that all the work on the farm is done by students. The whole farm is under experiment, and those obtaining work there have opportunity to learn the nature and results of these experiments. They also aid in caring for the various breeds of cattle, sheep and hogs kept on the farm. Students of marked ability in agriculture are often employed as foremen, for which service they are paid 15 cents an hour.

Means of Illustration.— Two hundred and eighty acres of land used for farm purposes, with hundreds of plats under experiment in grain, grasses, and forage crops; and illustrating various methods of culture and rotation.

A barn 50 x 75 feet, expressly arranged for experimental uses; and connected with it a general-purpose barn, 48 x 96 feet, for grain, hay, horses, and cattle. Both buildings are of stone, and are provided with an electric motor, run by the central heating plant of the institution. The barn is equipped with improved machinery for shelling, grinding, thrashing, cutting for the silo.

Two piggeries — one of 10 pens, for experimental uses, and one of 6 pens, with separate yards, for general purposes.

An implement house 22 x 50 feet, of two stories; and corn-cribs.

Shorthorn, Aberdeen-Angus, Hereford, Holstein-Friesian and Jersey cattle; Berkshire and Poland-China swine; and Shropshire sheep.

Farm implements of improved patterns.

Collections of grains, grasses, and forage plants.

Buildings, stock and equipments are valued at $23,000.

Horticulture and Entomology.

HORTICULTURE.—*Second Year*—Fall term.—It is the aim to teach this from a botanical basis. The student applies his knowledge of the prime facts in botanical physiology to the various operations of the nursery, orchard, and farm. Instruction is given by series of lectures upon the following topics, among others: The scope of horticulture. General principles of propagation—by buds, by seeds. Production of improved varieties—by careful selection of seeds, by interfertilization of known kinds. Perpetuation of valuable sorts of fruits by bud propagation—budding, grafting, layering, etc. The important points in nursery manipulation. The orchard: Conditions of site, soil, exposure, elevation; special treatment of different kinds of fruit-trees; pruning; gathering and storing fruits. Small-fruit culture: List of varieties suitable for Kansas planting. Vegetable garden: Selection and preservation of seed; planting and transplanting; the management and use of hotbed and cold-frame. Two weeks of the term are devoted to class-room practice in the making of cuttings and apple grafts.

Fourth Year—Spring term.—This course will be given in 1897–'98 for the first time, and will be an alternative with agriculture in the Farmers' Course. Its nature will be determined by the professor in charge.

Floriculture.—In the spring term of the fourth year the young women study floriculture, the subject including general greenhouse management, the treatment of plants in window gardening, the growing of flowering plants in the open air, the destruction of plant pests, etc.; practice in the plant houses alternating with lectures on these topics.

EXTENDED COURSE—*Fruit Culture.*—Fall term. This course includes a study of the leading orchard and small fruits and grapes adapted to culture in the West; a discussion of the best methods o planting, pruning, and training; followed by a study of the distinctiv characters of varieties; merits for home use and for market; keepin qualities; best methods of gathering, handling, storing, and marketing. Lectures.

Forestry.—Winter term. A study of the native trees of Kansa and adjacent states will be made, with special reference to their distribution and adaptation to variations of soil and climate, also of th native and introduced species best adapted to use in forest plantatio and shelter belts; selection and arrangement of varieties in plantations; raising of seedlings; planting, culture and management trees for timber and for wind-breaks; commercial timbers of th United States. Lectures.

Vegetable Gardening.— Spring term. The subjects treated are soil, location and preparation of ground for garden; use of glass structures in raising vegetables and plants; special methods of planting and culture of the leading vegetable crops for market and for home use; varieties best adapted to Kansas culture; garden irrigation. Lectures.

Horticulture.— Fall term. A topical study is made of the more important cultivated fruits and vegetables, as to their origin, introduction, and improvement by culture, selection, and hybridizing. This work is intended to be done largely in the library, the student's researches being directed and advised by the professor in charge.

Greenhouse Construction and Management.—Winter term. The student will devote this term to the study of the principles of construction and heating of the various glass structures used in horticulture. The handbook of Professor Taft on " Greenhouse Construction " will be used as a basis for this work, supplemented by a study of the greenhouses and propagating pits on the grounds.

Ornamental Gardening.— Spring term. Two lectures each week on the ornamental plants, shrubs and trees most valuable for use in Kansas; some elementary principles of landscape planting; planning of home grounds; location and construction of walks and drives; grouping of trees and shrubs — these lectures to be supplemented by three days' work of the student in the College greenhouses, gardens, and grounds, becoming familiar with the large collections of plants and trees to be found there, and in the library, in the study of their botanical and cultural history.

Horticultural Work.—Young men electing the Farmers' Course in the fourth year take their industrial either on the farm or in the gardens throughout the year. The work is made instructive, and hence constitutes a part of the student's education.

In this work students are given practical instruction in the planting and arrangement of nursery stock, digging and planting of trees, pruning and training of trees and vines, transplanting and management of small fruits, use of hotbeds and cold-frames, and general vegetable gardening. Special students during the winter term receive more advanced instruction in the various methods of propagation, in grafting room and greenhouses. Students who show special proficiency in horticulture are often employed as foremen. Work done in this department is paid for at the same rate and is governed by the same rules as in the farm department.

Means of Illustration.— Orchards containing 100 varieties of apples, 30 of peaches, 10 of pears, 20 of plums, 30 of cherries, and 5 of apricots.

Small-fruit garden, with 200 varieties of small fruits, including blackberries, raspberries, gooseberries, currants, and strawberries; and vineyard, with 160 varieties of grapes.

Forest plantation of 12 acres, containing 20 varieties, of from 1 to 25 years' growth.

Ornamental grounds set with a variety of evergreens and deciduous trees. Sample rows, containing about 150 varieties of ornamental and useful shrubs and trees, labeled.

Vegetable garden with hotbeds and cold-frames, and experimental beds. Practice row for students' budding, grafting, cultivating, and pruning.

A well planned and furnished greenhouse of three rooms, stocked with a fine collection of native and exotic plants; three propagating pits, 12 x 70 feet, for experimental work, and three others of the same size with commodious workroom adjoining, and equipped with the best improvements for the use of the young women in the practice of floriculture.

A tool room containing 50 individual cases of horticultural tools, besides tools and implements for general use, and pumps and apparatus for spraying with fungicides and insecticides.

Museum, containing a collection of woods from American forests, seeds of many varieties of vegetables, and a herbarium of cultivated grapes.

Value of property, exclusive of orchards and grounds, $17,000.

ENTOMOLOGY.—*Second Year*—Spring term.—In the elementary work of the second year, the intention is to give the student a basis for intelligent appreciation of the important relations of this science to agriculture and horticulture. A brief view of structural types precedes an outline of insect classification, and a special study of the economic bearing of the subject completes the work. Illustrative material is furnished from the individual collections of this students, and from the College museum. Charts and drawings from nature are used to illustrate points of value in classification. The pocket lens used in botany is required in this study.

Extended Course.—The student electing entomology in his fourth year reviews through the fall and winter terms the general subject as a necessary introduction to the special work of the terms following. The work of these two terms, however, is complete in itself. In the spring term, the time is given to entomological methods, including field work in observation and collecting, laboratory work in preparation, dissection, and preservation, and in the study of life-histories by the aid of the vivarium.

In the fall and winter terms of the fifth year, the student pursue the independent and critical study of systematic entomology, the work in which may be restricted when desired to groups of special agricultural importance. This course is followed in the spring term by lectures and practice in economic entomology.

After the winter term of the fourth year, the work in this course is dependent in each term upon the preceding work in the same line, and is most profitably taken in the order of sequence given.

Botany.

Elementary Botany.—Instruction in this branch is given during the fall term of the first year. The class-room work is supplemented by daily field work, which in the main runs parallel with the text-book used. The aim in the field work is to teach the student how to observe, and how to draw conclusions from his observations. The following are a few of the subjects studied: Germination of corn, bean or other common seed; opening of buds; falling of leaves; various fruits and their adaptations for dissemination; pollination and adaptations for cross-fertilization. These notes and observations, together with the necessary drawings, are submitted from time to time for examination and criticism. In addition to this, each student prepares a herbarium of not less than 50 species of native plants. These are named by the aid of Gray's Manual of Botany, sixth edition, or by a key to the genera of Manhattan plants, prepared by the professor of botany. The students are required to provide themselves with pocket lenses, under he direction of the professor in charge.

Advanced Botany.—In the winter term of the fourth year, the minute structure of plants is studied in the laboratory by the aid of he compound microscope. This includes an examination of the egetable cell and of various tissues and tissue systems, and of the ell contents, such as protoplasm, chlorophyl, starch, crystals, etc.

Each student has the use of a compound microscope, with the necessary tools and reagents. The laboratory manual used is Thomas nd Dudley's Manual of Plant Histology. Instruction is given by ectures. Each student is required to prepare a herbarium of not less han 25 species of twigs. These are named by the aid of a pamphlet repared by the professor of botany. A good herbarium and a large reenhouse are drawn upon for material for study.

Extended Course—*Morphology and Ecology.*—Fall term, three ays per week. The former includes a study of the organs of plants, eir modifications to perform various functions, and a comparison of ese organs in plants of various degrees of development. The latter that part of vegetable physiology which treats of plants as organisms, and would include such topics as germination, pollination, insectivorous plants, symbiosis, adaptation to climate.

Systematic Botany.— Spring term, three days per week. A study is made of the natural orders of phenogamous plants, their characters and relationships.

Vegetable Physiology.— Fall term, two days per week. This deals with the chemical and physical problems presented in living plants, such as the absorption of food, elaboration of organic material, transfer of food, action of light. This course should be preceded by the required physics, the advanced inorganic chemistry of the fall term, and the required fourth-year botany.

Cryptogamic Botany.—Winter term. During this term the principal types of fungi, algæ, mosses and ferns are studied. This course should be preceded by the required botany of the fourth year and the first term of the advanced zoölogy.

Economic Botany.— Spring term, two days per week. A study of the economic products of the vegetable kingdom, their origin, history, and uses. This should be preceded by forestry and systematic botany.

Those who do not wish mention of special proficiency in botany may be admitted to the courses without the requirements in chemistry, physics, zoölogy, and horticulture.

Means of Illustration.— A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the state; a twig herbarium, illustrating woody plants in their winter condition; and a seed herbarium, containing a representative collection of seeds and fruits; also 28 compound microscopes, four dissecting microscopes, tools, reagents, etc. The department is provided with a zinc culture room, and the ordinary apparatus for bacteriological work; a dark room and apparatus for photography; microtomes and other apparatus for microtomi~~c~~ work. Valued at $11,000.

Anatomy, Physiology, and Zoology.

Anatomy and Physiology.—Fall term, third year.—Human anatomy is made the basis of a thorough study in physiology and hygiene. This includes such subjects as digestion and food; circulation of the blood; respiration and ventilation; secretion and excretion; the nervous system; and the special senses. The study, beginning with human anatomy and physiology, merges into general zoölogy; here the student becomes acquainted with the basis of zoölogical classification, the comparison of selected types, and the study of available forms. Skeletons and an Azoux manikin, with charts and drawings, furnish the means of demonstration. Valued at $2,000.

Extended Course.—This will include a general review, with advanced work in anatomy and physiology, human and comparative. It will be supplemented by dissection and experimental work in the laboratory. These studies must be taken in the following order: General review of anatomy, advanced physiology, comparative anatomy and physiology.

Special Hygiene.—Fall term, fourth year.—To the young women a course of daily lectures is given by the professor of household economics upon the laws of life and health. The course extends over a period of 14 weeks, and covers questions pertaining to personal health and the health of the household, such as food, air, exercise, clothing, temperature of rooms, and care of sick room.

Zoology.—Winter term, third year.—Using Orton's Zoölogy as a text-book, the student becomes acquainted with the basis of zoölogical classification. The comparison of selected types and the study of available forms by the aid of keys is also a part of the work of the term.

Extended Course.—The fall and winter terms of the fourth year are given to a study of morphology, in which a series of dissections of selected types is made. A short series of lectures on development closes the winter term. In the spring, the student is recommended to take the work of that term in the entomological course, the instruction in which may be sufficiently varied to be of equal use to both.

The study of systematic zoölogy is begun in the fall term of the fifth year, and by the selection of special groups is carried through to the end of the winter term. In the spring, a course of lectures outlines the principles in the geographical and geological distribution of animals, and presents the main features of evolution. Reference studies, and essays by the student, are a part of the work.

The studies of this course should be taken in the order given.

Means of Illustration.—The zoölogical museum, containing numerous representatives of the several classes, especially full in the fishes and mollusks of Kansas, and in illustrations in economic and systematic entomology. Increasing material in skins, alcoholic and anatomical preparations are available also for the use of the student. Value, including cases, $7,800.

Veterinary Science.

The 11-weeks course of lectures to the young men, in the spring term of the fourth year, is adapted to wants of farmers and stockmen, and includes such topics as the following: Hygiene and nursing of sick and wounded stock; diseases of bone and their treatment; diseases of the circulatory, respiratory and digestive systems, their causes, treatment, and prevention; surgical operations; difficult parturition; shoeing and lameness; veterinary dentistry; horse judging and examination for soundness; some contagious and infectious diseases; their nature and prevention; the principal medicines used in treating sick animals, and how to give them. Whenever practicable, operations are performed before the class, and students are requested to assist.

Extended Course.—This course is intended for students who desire to pursue the study further than the limited time of the regular course will allow. It will be made as practical as possible. In contagious and infectious diseases, a study will be made of the organisms which produce diseases of stock, the periods of incubation of the disease, symptoms, prevention, and treatment.

Winter Term.—Theory and practice of veterinary medicine; conformation with reference to particular requirements of animals; soundness and law of warranty.

Advanced work is offered in the spring term in comparative anatomy and physiology, materia medica, and surgery.

Means of Illustration.—A laboratory fitted with apparatus, instruments, and reagents, for the study and treatment of disease. An Azoux model of a horse, which is dissectible, showing nearly 1,000 anatomical structures, skeletons, charts, and a large collection of anatomical specimens, showing healthy and diseased structures. Valued, with cases, at $2,400.

Chemistry.

The study of chemistry occupies 46 weeks. Fourteen weeks are first given to inorganic chemistry. In this the elementary principles of the science are studied, with special reference to familiarizing the student with the essential phenomena of chemical action. Combination by weight and by volume; formation of bases, acids, and salts, and the relations existing between them; systematic nomenclature and notation; the natural classification of the elements, based upon their properties—these, with careful study of the most important properties of the commoner elements, furnish the basis for the work. The facts studied are illustrated whenever practicable by experiments on the lecture table. In addition to this, each student gives two hours weekly to personal repetition of such experiments as can be performed with simple apparatus. Preparation of the elementary gases and a number of compounds, with experiments illustrating their properties, neutralization of bases and acids, and experiments

CHEMICAL LABORATORY.

CROSSCUP & WEST ENG. CO.

CHEMICAL LABORATORY, ANALYTICAL ROOM.

illustrating the formation and stability of salts, are examples of the kind of work done by the students.

The course in organic chemistry extends over six weeks. This is taught by lectures, in which the object is less a presentation of systematic organic chemistry than a study of the occurrence, manufacture and uses of the more important organic compounds met with in every-day life. In so far as the time and subjects will permit, however, the chemical relations existing between the various classes of compounds, and their relations to inorganic compounds, are set forth as simply and distinctly as possible. The lectures are illustrated by experiments, but the students do no laboratory work in this connection.

The course which, for convenience, is designated analytical chemistry is not designed so much to perfect the student in analysis as to familiarize him with the properties, the resemblances, and differences of the compounds of the various bases and acids. It is a course in experimental chemistry in which the regular methods of identification and separation of substances are used as a basis for the work. Each student has his own work-table, with water, gas, reagents, etc., and works eight hours per week for 10 weeks. He is first given single salts of known composition, then simple known mixtures, and finally unknown substances, which may be soluble or insoluble, simple or complex.

In addition to the laboratory work, the student is required to study carefully the nature of the chemical reactions which take place. Besides the small handbook used as a guide in the laboratory, students are expected to consult the larger works of reference. Two hours weekly are spent in the lecture room, in which the teacher conducts a quiz upon the subject and explains any obscure points. Throughout the term, the student is required to express by equations the reactions observed in the laboratory. The aim of the course is to unify and amplify the student's knowledge of inorganic chemistry.

Chemistry of Foods and Agricultural Chemistry.—In the fall term of the third year four weeks are given to a course of lectures on foods, their proximate principles, and their adaptation to the various needs of the animal body. Throughout the spring term, lectures are given on the formation and characteristics of different types of soil, the soil requirements of a variety of crops, the modes of soil enrichment and amelioration, and the general relation of crops to earth, air, and water.

Extended Course.—For those students desiring to study chemistry further, either for itself or as an auxiliary to other branches, a course in advanced inorganic chemistry is offered, extending through the fall and winter terms. This course is designed to increase the student's knowledge of the facts of chemistry, and to give breadth and strength to his grasp of their relations. Special topics are treated in lectures. Carefully chosen laboratory work, designed to illustrate the principles of the science, forms an important part of this course. Following this, the spring term is given to organic chemistry. The laboratory work done in this connection includes the preparation of a considerable number of compounds, and, if time permits, the quantitative separation of some of the more important proximate constituents of foods and fodders.

Quantitative analysis may be taken up at any time. if the student's proficiency makes it advisable. It may be taken to any extent, from a partial course to the equivalent of two studies in the fifth year. After the necessary amount of preliminary training, the student may give special attention to any of the various lines of quantitative analysis, such as that of foods and fodders, soils and fertilizers, ores, water, gases, etc. The investigation of special chemical questions will be encouraged.

Mineralogy is no longer a required subject in the course of study, but crystallography and mineralogy are offered as electives to properly qualified students.

Means of Illustration.—Laboratory tables with all the necessary equipment for 80 students in qualitative analysis and 8 in quantitative analysis ; facilities for assaying ; illustrative apparatus, both general and special ; a well-selected mineralogical collection representing all but the rarest species, in various forms, colors, and structures ; a good collection of rocks ; a set of the Stassfurt minerals and the fertilizers prepared from them. Value, $8,500.

Geology.

During the winter term of the third year a study is made of the igneous, atmospheric, aqueous and organic agents that have brought the earth to its present condition; the structure and arrangement of rocks; the order of succession in the strata of the earth's crust and in the life of the globe. Prominence is given to facts having an economic bearing, valuable mineral deposits in Kansas receiving special attention.

Means of Illustration.— Collections of specimens representing the principal geological formations; Kansas fossils and rocks, typical of the geological ages found in the state. Valued at $2,200.

Physics.

Elementary Physics.—Spring term, first year. This term's work is intended to give the students a general view of the subject, with such laws and principles as will be useful to them in scientific studies. Apparatus will be used and scientific investigation encouraged.

Advanced Physics.—Fall term and half of winter term, fourth year.—This time is given to the experimental and text-book study of sound, heat, light, electricity, and magnetism. Meteorology will be treated in connection with the several subjects in physics, including a careful study of instruments and methods employed in taking meteorological observations.

Extended Course.—Advanced work in physics is offered during each term. It must be preceded by the physics of the required course.

Means of Illustration.—Complete physical apparatus, for general instruction in physics, and meteorological instruments, including a self-recording anemometer. Among the apparatus for special work may be mentioned, Coulomb's torsion balance, Kohlrausch differential galvanometer with reading telescope, Deprez-Carpenter ammeter, Ayrton and Perry's voltmeter, Thompson's potential and current galvanometers, Carhart-Clark standard cell, standard legal ohm, Wheatstone's meter bridge, dynamos. The value of the whole is $4,000. The distribution of power by electricity is illustrated at the College by a 40-horse-power generator and four motors of 5, 8, 10 and 12 horse-power.

Mechanics and Engineering.

Elementary Mechanics.—Winter term, third year. The laws of motion and force are treated and applied to falling bodies and other commonly observed phenomena. The subjects of central forces, friction, work, energy, complete the study under the head of dynamics. Under statics, the following subjects suggest the outline: Representation and composition and resolution of forces; analytical relations between forces in general; moments; conditions of equilibrium; center of gravity and stability. About two weeks are given to the study of the elementary machines, as the lever, screw, wedge, etc.

Mechanics of Materials.—Fall term, fourth year. Two recitations per week will introduce this subject, and will include the effect of tension, compression, shear, torsion and combined stresses on the materials of engineering.

Materials of Construction.—Fall term, fourth year. Lectures twice a week will be given on the materials used in engineering. The subject will include the methods of manufacture, physical characteristics, strength and adaptability, of iron, steel, timber, alloys, and clay materials.

Machine Design.—Spring term, fourth year. Two recitations per week, and three drawing-board exercises of two hours per day. The elements of machines will be studied, as fastenings, gearing, belting, etc., and applied to constructive problems on the drawing-board.

Applied Mechanics.—Spring term, fourth year. The matter of the text-books is used as a basis to accustom the student to a ready application of simple mathematical and analytical methods to the study of machinery. The work is supplemented by lectures.

Woodwork and Ironwork.—In the first term of woodwork a definite, graded series of tasks is given in joining, work to dimensions, and simple problems in construction, with the proper use and care of common bench tools, through which each student is advanced according to ability. Practice is given later in general woodwork, carpentry, cabinet-making, turning, and pattern-making; and the advanced students may have work suited to their chosen line, with special problems of construction, and special training in the use and care of fine tools. All work during industrial hours is assigned by the superintendent, and belongs to the shop, except that fourth-year students may be allowed to work from drawings of their own upon articles for their own use and profit. Students assigned to the shop may, when permitted, have the use of the shop outside of the practice hours for work of their own, under direction of the superintendent.

A general course in ironwork includes graded work in blacksmithing, the management of the forge and hammer, drawing out, welding, forming, etc.; graded work in founding, covering, bench and floor molding in iron and brass; also graded work in machine-shop practice, including bench and machine tool work, filing, chipping, laying out work, boring, turning and planing the metals.

Means of Illustration.—Carpenter shop, with 220 separate kits of tools, and benches for 45 students in each class; lathes, planer, circular saws, friezer, mortising machine, grinder, and tool room containing all kinds of woodworking tools for general use. Shops for ironwork contain 16 blacksmith forges; brass foundry, with 12 benches and 50-pound furnace; iron foundry, with two-ton cupola and good assortment of flasks; machine-shop, equipped for 30 students, with hand tools, six 14-inch engine-lathes, one speed lathe, planer, shaper, No. 2 Brown & Sharpe universal milling machine, Walker universal grinder, drills, bolt cutter, and tool room of fine tools. The heating and power plant attached form a part of the illustrative apparatus, containing five boilers, pumps, one 50-horse-power Ball &

CARPENTER SHOP.

MACHINE SHOP.

Wood engine, one 10-horse-power Atlas engine, 40-horse-power Belknap generator, and other illustrative apparatus. Wood shop run by a 12-horse-power motor; iron shop, by an 8-horse-power. Value of equipment, $25,000.

Mathematics.

It is the aim of the department of mathematics to give a thorough training in a small number of subjects, and to develop in the student the ability to attack new problems, rather than to burden his mind with a large number of facts or special methods. It is also characteristic of the methods of the department that an attempt is made to give to the mathematical subjects a touch of human interest, by directing the attention of the student to the historical development of these subjects. For example, the course in plane geometry is opened by a lecture on the history of geometry.

The course in differential and integral calculus, in the first term of the fourth year, is intended as a preparation for a later course in mechanics, and covers only the most essential points, with a sufficient number of applications to impress these principles on the mind of the student.

FIRST YEAR—*Algebra.* First term—Primary processes, factoring, fractions, the simple equation.

Second term—Simultaneous equations, involution, evolution, theory of exponents, radicals.

Third term—Radical and quadratic equations, ratio and proportion, progression, series, logarithms.

SECOND YEAR.—First term—*Plane Geometry.*

Second term (6 weeks)—*Solid and Spherical Geometry.*

THIRD YEAR.—First term—*Trigonometry.* The plane triangle, goniometry, the oblique triangle. *Surveying.*—Use of instruments, platting, determination of areas, United States government surveys, triangulation. Field practice with compass, transit, plane table, and Y level.

Third term—*Analytical Geometry.*—In Mechanics' Course. Cartesian and polar coördinates, the straight line and circle, other conic sections, the general equation of the second degree.

FOURTH YEAR.—First term—*Calculus.* In Mechanics' Course. Derivatives, differentiation, theory of differentials, maxima and minima, methods of integration. No text-book required. For reference: Byerly's Differential and Integral Calculus.

For students in the extended course, and graduate students, courses in advanced algebra, calculus, modern geometry, analytical geometry of three dimensions, theory of functions, elliptic functions, differential equations, or other subjects of the higher mathematics, can be arranged. Value of apparatus, $1,500.

Bookkeeping and Commercial Law.

First Year.— Six weeks of winter term. Beginning with a simple cash account, bookkeeping is developed through all the essential principles. Considerable time is given to those forms best adapted to farm and business life. Each student provides a full set of blanks and keeps a regular set of books, in which accuracy of calculation and posting and neatness of execution are just as essential as correct understanding of the principles. In connection with the work in bookkeeping, a practical course of 12 lectures in commercial law is given, including contracts, farm rights, negotiable paper, sales, real estate, partnership, bailment, common carriers, and business forms.

Drawing and Descriptive Geometry.

Free-hand Drawing and Sketching.— The course in free-hand drawing comprises 42 lessons in surface designing and 24 lessons in sketching from the object. The surface designing is taught in the fall term of the first year. The student begins with forms involving the straight line and the arc. He is led to note the effects of geometrical arrangement, repetition, alternation, symmetry, proportion, harmony, and contrast. Later, the conventional ornament is taken up, and more subtle curvatures and complex forms are introduced. Toward the close of the term, natural forms and historic ornament in the flat are studied. The work in sketching is connected with the study of linear perspective in the spring term of the third year. The models used are geometrical solids and objects of utility and beauty, whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow, and the reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish.

Graphics.— The course in graphics comprises six weeks of geometrical drawing; six weeks of orthographic projection, including plane intersections; 22 weeks of descriptive geometry, including the study of plane and space curves, axonometric projection, double-curved surfaces, warped surfaces, and the principles of shades and shadows; and 16 lessons in linear perspective. The geometrical drawing is taught in the winter of the first year, and consists of the construction of perpendiculars, parallels, angles, and polygons, the circle and its secant lines, the ovoid, the oval, and the spiral, various geometrical designs and elementary architectural forms, the use of drawing-board and T square, and the conventional representation of building materials. Projective drawing is taught in the second, and descriptive geometry in the third and fourth, years ; linear perspective is taught in the spring term of the third year, in connection and alternating with work in sketching from object. The College furnishes drawing-board, T square, triangles and water-colors for the graphic work done at the College, but all tools, including drawing-board, T square, triangles, compasses, and protractor, for home use, must be furnished by the student.

Technical Drawing.— During the winter term of the third year, each student is required to draw the floor plans, elevations and details of a small building. In the winter and spring terms of the third, and in the fall term of the fourth, year, about 120 hours are given to dimension sketching, drafting, designing, and rendering in ink and water-color, with the object of acquainting the student with the practical methods followed in the workshop, the drafting room, and the studio. Accuracy of measurement and neatness of execution are required in all work. Every student is instructed in the manipulation of the blue and black printing processes.

Some of the graphic work of the different classes and special students is retained by the department for exhibition during commencement.

Extended Course.—Work for students who intend to follow pursuits in any of the various lines of designing, building, architecture and decoration is offered, as follows :

(*a*, *b*) Historic ornament, two terms, a study of representative historic facades, decorations, and details. (*c*) Heating and ventilation, one term, a critical comparison of the various existing systems. (*d*) Architectural details, one term, a study including the construction of arches, trusses, stairs, roofs, etc. (*e*) Architectural composition, one term, involving the preparation of drawings and specifications for simple architectural structures. Students who intend to take this course should also study landscape-gardening with the department of horticulture.

Means of Illustration.— Models, plaster casts, patterns, charts, collection of ornamental tiles, marbles, and terra-cotta forms. One of the class-rooms is provided with top light, and furnished with 25 Dietzgen drawing-tables. An adjacent room is fitted up with running water, coating table, ruby light, etc., for blue and black printing. Valued at $1,900.

English Language and Literature.

Analysis.— Fall term, first year. This includes the origin and growth of the language, the history of its grammatical forms, the analysis of sentence making, and the discussion of idioms and difficult constructions, together with such contraction, transposition and transformation of sentences as will aid in securing variety of expression.

Structure.—Winter term, first year. One term's work is given to careful study of words and their elements — roots, prefixes, and suffixes. The most fruitful primitives from Saxon, Latin and Greek are learned, and also the laws governing the formation of derivatives. Attention is given to the history and changes of words, and daily exercises teach careful discrimination in their use.

Composition.— Spring term, first year. One term is given to the study and practice of composition, including the elements of rhetoric.

Rhetoric.— Spring term, third year. This is the study of higher rhetoric, including discussions of the fundamental processes of composition and the essential elements of the different forms of discourse. Selections from good authors are studied for the application of principles and the outlines of criticism.

Literature.—Winter term, fourth year. This includes the history and development of English literature, with illustrations from the best authors. Students are led to appreciate the power of our mother tongue, and at the same time gain some acquaintance with the best thought of the world.

In the spring term of the fourth year, an additional course is provided for the young women of the class. This consists of a study of nineteenth-century authors, with the reading and discussion of standard works.

Rhetoricals.

The aim of this course is to so develop the powers of the student's mind that he may be able to think clearly for himself and to express his thoughts effectively in written or oral form. Practical work will be done according to natural and scientific methods.

The work in oratory is based upon the natural order of unfoldment in the activities of the human mind, and is in accord with the latest approved pedagogical principles, the aim being to cultivate original thought and to produce that condition of mind and heart which shall result in personal power and character.

This is done by bringing the pupil into vital relationship with the masterpieces of the greatest minds and causing the pupils to produce in others the same mental states in which these great minds were when they wrote or spoke. The method is entirely free from mechanical dictation; working always from within outward. The results are obtained entirely by means of arousing the activities of the pupil's mind through concentration upon proper objects of thought.

Voice Culture.— The voice work is designed to fit the voice to ful-

KITCHEN LABORATORY.

SEWING ROOM.

fil its natural function, namely, to be a willing servant of the soul, and consists of practice on exercises for freedom, flexibility, volume and harmony of voice.

Physical Culture.— The system of physical culture consists entirely of movements without apparatus, designed to give health, freedom, strength and grace to the body, in order that it may act quickly and truly in obedience to the highest thoughts, feelings and purposes of the soul. The course is thoroughly practical, and will be of benefit to persons in any walk of life.

Occasional short talks or informal lectures will be given on topics relating to this department.

History and Political Science.

United States History.—An elementary training in United States history is required for entrance. In the winter term of the third year, a half term is given to the study of the institutional development of the nation.

General History.—Fall term, third year. The objects of the course are the fixing of the chief events in the memory, the training of the reason, and the cultivation of the taste for historical reading. Outlines are made and memorized; questions are asked that require thought and research; lectures are given; original sources are examined, and reference reading required.

Civil Government and Political History.—Winter term, third year. Training for citizenship is kept constantly in view. Investigation and discussion of all disputed points are encouraged.

History of Industry.— Half of winter term, fourth year. This course will trace the development of the factory system in England and America, and of the labor legislation, trade-unionism, etc., connected therewith. The course will be conducted partly by lectures and partly by required readings in such works as Taylor's "Factory System" and Carroll D. Wright's "Evolution of the Factory System of America."

Extended Course.—Fall term, history of the nineteenth century; winter term, comparative politics; spring term, constitutional law.

Economic Science.

The work in economic science occupies three terms, as follows:

Principles of Economic Science.— Spring term, third year. Introduction to the general subject, with elaboration of certain aspects. Pains are taken to compare conflicting views and point out sources of information on all sides of vexed questions. Lectures and library reading. Each student keeps a note-book and reading record.

Economic and Social Problems.— Fall term, fourth year. In this course attention is given to the questions of land, labor, capital, competition, poverty, wealth, etc.; to proposed palliative measures; and to the single-tax, anarchism, and socialism. Lectures, theses, and reading.

Finance.— This course includes the historical and theoretical study of money and other media of exchange; of banking, taxation, tariffs, and public debts.

Extended Course.— A full elective course will be given through the year for those who have already taken work in political economy. It will consist, in part, of study throughout the year of the recent economic theories underlying industrial and financial problems; and in part of special investigations and reports, from members of the class, of problems specially pertinent to Kansas and adjoining states.

In the fall term, the telegraph, railroads and city monopolies will be studied; in the winter term, farm mortgages, prices, and other agricultural problems; and in the spring term, life and fire insurance, building and loan associations, and other problems of coöperation and saving.

In all the above courses the attempt is made to enable the student to handle the literature of the science, to examine the subject in hand from different points of view, and to form intelligent judgments regarding economic questions.

The work of the two departments of history and political science and of economic science is closely correlated.

Psychology and Logic.

Psychology and Logic.—Winter term, fourth year. A short course in psychology gives the general principles of intellectual and moral philosophy. Sensation, apperception, perception, memory, imagination, thought, feeling and volition are topics of explanation and analysis. Theories of right and wrong and correct principles of action are made the means of a clear understanding of individual responsibility, with special attention to personal rights and duties. Topics are assigned for research, to be presented in thesis form at the close of the term.

The art of reasoning correctly is aided by a brief study of systematic logic, both deductive and inductive. Special prominence is given to methods for exact observation and experiment and correct principles of classification. The previous researches and experience of the students are made to illustrate these principles.

Household Economy and Sewing.

Household Economy.— A series of lectures to young women of the second year continues through the winter term of 12 weeks. These cover the subjects of marketing, the chemistry of cooking, order, neatness and beauty in housekeeping, and comfort of a family.

Cooking.—During the winter term, the young women who have lectures on household economy are required to cook one hour each day. They are taught various methods of making the substantial articles of food, as well as allowed to spend some time on the dainty dishes. During the term, they have practice in waiting on the table and in serving guests, thus putting the lectures into immediate practice.

During the fall term, any students who have passed the study of household economy may take cooking as an industrial, in which canning fruits, making preserves, jellies, pickles, mince-meat, desserts, cake and fancy breads form the principal part of the work.

The class spends one hour each day in the kitchen laboratory, and cooking is done by each student.

Dairying.—During the spring term, daily instruction and practice in domestic dairying are given the young women of the second year by the instructor in household economy. Here the regular daily work is supplemented by a short course of lectures, intended to explain the best practice in the arts of butter- and cheese-making, and to give the reasons therefor. The following topics cover, in the main, the instruction given the class : Influences affecting the quality and quantity of milk ; butter-making ; creameries ; "deep" and "shallow" setting systems ; packing and preserving butter ; the household and factory systems of cheese-making.

Sewing.— One term of sewing is required before the completion of the first year of study. During this term the work is carefully laid out by the superintendent, in a series of lessons, graded to the capabilities of each student. To more advanced students all ordinary forms of sewing with needle or machine are taught, and any student may furnish material, and work for her own advantage under direction of the superintendent. Cutting and fitting by a straight-line system are taught, and the systems are furnished at wholesale rates. Fancy needlework and knitting may be taken at certain stages of the course.

Extended Course.— The work on Breads, Meats and Salads (winter term) covers the study of flours, yeasts, and baking-powders, as well as knowledge of the making of many kinds of bread. The work on meats includes a study of meats in the shop or on the block, the best ways to cook certain cuts of meats, and special work on the use of left-over meats for the making of savory and nourishing dishes. The work in salads gives practice in making those of meats, vegetables, eggs, and fruits.

Cake, Pastry and Desserts (spring term) covers the principles governing the making of the various kinds of cake and their uses, in preparing meals, and entertainment for friends. Pastry includes puddings and sauces, pies and puff paste, the use of various flours in these foods, and the manipulation of materials. Desserts includes the uses of ice-creams, ices, sherbets and frappes, and the making, packing and serving of these dishes.

Regular lessons are given on the values of the foods under consideration and the most convenient method of serving them. Practice is afforded in the kitchen laboratory. Deftness of manipulation as well as knowledge of combinations must be attained before this advanced course can be taken. For certain portions of the work, special chemistry, botany and entomology are required.

Means of Illustration.—Kitchen laboratory, with ranges, cooking utensils, dining-room furnishings, dairy furniture. Valued at $800.

Sewing rooms, with eight machines, models, patterns, and cases. Worth $650.

Music.

Vocal Music.—Instruction is furnished free of charge, under the direction of the Faculty. Classes meet on Wednesdays for advanced pupils, and for beginners on Tuesdays and Thursdays, at 1:30 P. M. This study is taken up at the choice of the student, but regular attendance is required as at the other classes. The advanced class shares in the music of public exercises during commencement week.

Instrumental Music.—Instruction upon the piano, organ, mandolin, guitar, and the more important orchestral and band instruments, is given free to students in the regular courses, under the following restrictions:

It may be taken as an industrial by ladies only, after the required industrials of the first year, and after passing an examination equivalent to one term in vocal music, in which case one hour's daily practice at the College is required.

It may be assigned as an extra at any time, when a student does well in the general course of study.

Class organization shall be wholly under control of the professor in charge. Students in the music department shall be subject to the call of the professor for music connected with College exercises.

Students who are sufficiently advanced to join the College orchestra, which has its rehearsals on Wednesday, at 2:30 P. M., or the College cadet band, which practices in connection with military drill may become members by assignment.

PRINTING OFFICE.

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

The College pianos and organs are used for daily practice; the other instruments must be provided by the pupils using them. A full course, extending over four years, includes harmony and composition; but students may take lessons for a single term if they choose.

Means of Illustration.—Music rooms, with five pianos, four organs, and other instruments, valued at $1,200, and nine charts, valued at $1,800.

Printing.

Two courses are pursued in this art. In one the student is taught the use of the implements or tools used in typography; composition and imposition; correcting proof; technical terms; presses and their workings; and the general duties of a first-class workman. The other course of lessons embraces instruction in spelling, capitalization, syllabication, punctuation, proof-reading, and such other work as will make the student accurate and expert. Wilson's Punctuation is the text-book; but much of the instruction is oral — such as grows out of the every-day experience of the office.

Admirable drill is furnished by the *Industrialist* to all, but especially to those who take the full course. The printing which the departments of the College require gives to the advanced student a fair knowledge of the principles and practice of job work.

Means of Illustration.— Printing office, with 30 pairs of cases; large fonts of 6-point, 8-point, 10-point and 11-point Roman type; a good assortment of job type and brass rule; a Babcock cylinder press, with electric motor, a New Liberty quarto-medium job press, a Gordon eighth-medium job press; a mitering machine; a rule-curving machine; and a paper cutter. Value of equipment, $4,300.

Military Training.

Theoretical.— Students of the first year have one lesson each week of the winter term in drill regulations. A course of lectures is given twice a week during the winter term of the second year. These are designed to show how an army is organized, equipped, and supplied; to explain some of the minor operations of war; to show the organization of the militia under the militia law of this state. Instruction is afforded to such as desire it in other military subjects.

Practical.—All young men below the third year in the regular course are assigned to drill, unless excused by the Faculty. Drills are required from four to five times a week in fall and spring terms. In the winter term, drills are arranged to occupy time during the class hours not otherwise provided for. Special attention is given to "setting up," or physical development.

The practical course in infantry embraces small-arm target practice, and, as far as possible, all the movements prescribed by the

"Drill Regulations of the United States Army" that are applicable to a battalion. Instruction in artillery includes, as far as practicable, such portions of the United States drill regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, and firing blank cartridges.

The College battalion is divided into companies, which are officered by students appointed each term by the professor in charge, with the approval of the President.

Arms and accouterments are furnished by the United States government, the students being required to keep such as they use in proper condition. Uniforms for drill are furnished by the College.

By order of the secretary of war, the names of the three most proficient fourth-year students are reported to the adjutant-general of the army and the adjutant-general of the state.

Means of Illustration.—Armory, containing 225 stands of arms (breech-loading cadet rifles, caliber .45), with accouterments; two three-inch rifled guns; also swords, uniforms, etc. Value, exclusive of arms, $1,900.

General Information.

EXAMINATIONS.

Examinations for admission are held at the beginning of each term, as laid down in the calendar of the College year. Applicants entering at any other time during the term have special examinations. These examinations are chiefly written, and a standard of 70 per cent. is required to pass any study.

Examinations in the course are held as arranged by the Faculty. The results of these examinations are marked on a scale of 100, and combined with the average of the preceding daily exercise upon the same scale into a grade for report to the Secretary. But any student not present at three-fourths, at least, of the class exercises, receives, at such times as the teacher may name, a more extensive examination than the general one; and this examination alone decides the grade. Unexcused absences are taken into account in calculating grades.

Averages of grades in the register are made by giving the final term grade a value of two-thirds and previous grades a value of one-third. After each term examination during the first year of attendance, a report of advancement is made to parents; and any student, upon leaving College at the close of a term, may receive a certificate of standing.

The final grade and the term average must be at least 70 for passing any study; and any student who fails to pass in two studies of the course may either drop back a year or withdraw from College.

After completing the studies of the first year, students are allowed special examinations only upon recommendation of the professor in charge, and by permission of the Faculty. Permission for examination in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive.

Candidates for graduation must make good all deficiencies before entering upon the work of the spring term of the fourth year.

Students are not catalogued in the third-year class unless deficiencies of previous years are provided for.

Students deficient in entrance studies must make good such deficiencies before entering upon the work of the second year.

TERMS OF ADMISSION.

Applicants for admission at the beginning of the College year must be at least 14 years of age, and able to pass a satisfactory examination in reading, spelling, writing, arithmetic, geography, English grammar, and United States history. Specimen questions will be furnished on application. Those applying later in the year must show sufficient advancement to enter the classes already in progress. Every effort should be made to begin with the first day of a term, in order to advance with the classes from the first.

The following diplomas and certificates will be received in lieu of entrance examinations:

1st. Diplomas received on the completion of a county course of study which has been approved by the Faculty, when properly signed by the county superintendent.

2d. Certificates of passing the grammar grade in any city school with a course of study approved by the Faculty, when properly signed by the city superintendent.

3d. Kansas teachers' certificates issued by the county board of examiners, showing that the above-named studies have been passed with a grade of at least 70 per cent.

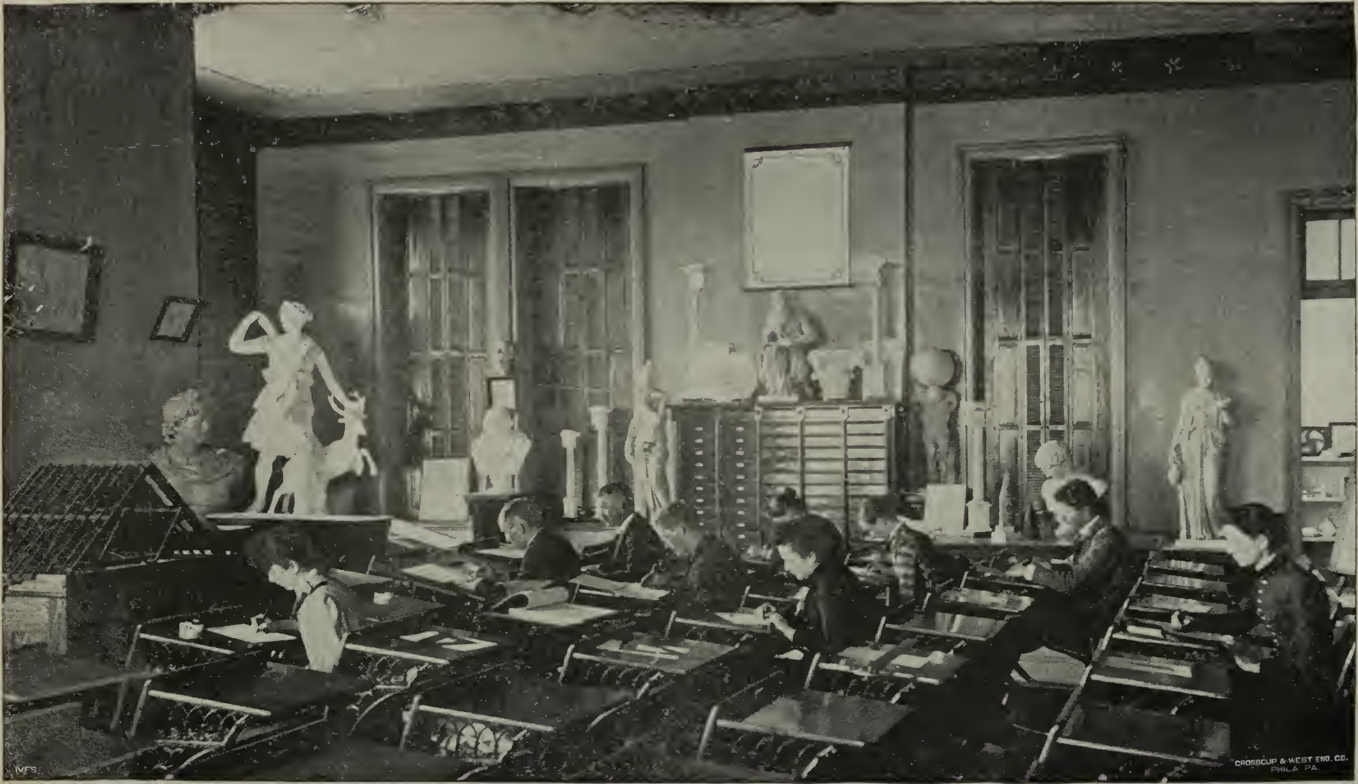
The Faculty have approved the courses of study adopted by the following counties and cities; others may be submitted for approval at any time:

COUNTIES.

Allen,
Anderson,
Barber,
Brown,
Bourbon,
Butler,
Chase,
Cherokee,
Clay,
Cloud,
Cowley,
Dickinson,
Doniphan,
Douglas,
Elk,
Ellis,
Ford,
Franklin,
Geary,
Greenwood,
Harper,
Harvey,
Jackson,
Jefferson,
Jewell,
Johnson,
Kingman,
Labette,
Leavenworth,
Linn,
Lyon,
Marshall,
Marion,
McPherson,
Miami,
Mitchell,
Montgomery,
Morris,
Nemaha,
Neosho,
Ness,
Osage,
Osborne,
Ottawa,
Pottawatomie,
Republic,
Reno,
Rice,
Riley,
Rooks,
Rush,
Russell,
Saline,
Sedgwick,
Shawnee,
Smith,
Sumner,
Wabaunsee,
Washington,
Wichita,
Wilson,
Woodson,
Wyandotte.

CITIES.

Abilene,
Alma,
Anthony,
Argentine,
Arkansas City,
Atchison,
Augusta,
Baldwin,
Belleville,
Beloit,
Burlingame,
Burlington,
Caldwell,
Chanute,
Cherryvale,
Chetopa,
Clay Centre,
Clifton,
Coffeyville,
Columbus,
Concordia,
Council Grove,
Dexter,
Dodge City,
El Dorado,
Ellsworth,
Emporia,
Eureka,
Fort Scott,
Fredonia,
Garden City,
Garnett,
Gaylord,
Girard,
Great Bend,
Hiawatha,
Holton,
Horton,
Humboldt,
Hutchinson,
Independence,
Iola,
Junction City,
Kanopolis,
Kansas City,
Kingman,
La Cygne,
Larned,
Lawrence,
Leavenworth,
Lebo,
Lincoln,
Lyons,
Manhattan,
Mankato,
Marion,
McPherson,
Minneapolis,
Neodesha,
Newton,
Olathe,
Osage City,
Osborne,
Oswego,
Ottawa,
Paola,
Parsons,
Pittsburg,
Pomona,
Pratt,
Russell,
Salina,
Scranton,
Seneca,
Solomon City,
St. Mary's,
Topeka,
Valley Falls,
Wamego,
Washington,
Waverly,
Wellington,
Wellsville.
Winfield,
Wichita.



DEPARTMENT OF INDUSTRIAL ART.

SURVEYING SQUADS.—IRON AND WOODWORK SHOPS.

COLLEGE BATTALION.

Applicants over 18 years of age, who, for lack of advantages, are unable to pass the full examination, may be received on special conditions.

Applicants for advanced standing in the course must pass examination in all the previous studies of the class to be entered; but, if they have pursued such studies in other institutions of similar rank, they may receive credit for their standing in those institutions, upon presenting a certificate from the proper officer, showing that their course has been equivalent to that given here.

A mature student may, by Faculty vote, be permitted to deviate from the regular course of study.

GENERAL DUTIES AND PRIVILEGES.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character, by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week-day except Mondays, and no student may be absent without excuse.

Students enrolled in any term cannot honorably leave the College before the close of the term, unless excused beforehand by the Faculty. A full and permanent record of attendance and scholarship shows to each student his standing in the College.

Chapel exercises occupy 15 minutes before the meeting of classes each morning, and unnecessary absence from them is noted. On Sunday no services are held in the chapel, but students are advised to attend the different churches of the city.

Every Friday, at 1:40 P. M., the whole body of students gathers for a public lecture or for rhetorical exercises of the third- and fourth-year classes.

Systematic training in gymnastic and calisthenic exercises is provided for both young men and young women, under teachers appointed by the College.

There are four prosperous literary societies, which meet weekly, in rooms set apart for their use. The "Alpha Beta," open to both sexes, and the "Ionian," for young women, meet Friday afternoon. The "Webster" and the "Hamilton" admit to membership young men only, and meet on Saturday evening.

The Young Men's and the Young Women's Christian Associations hold weekly meetings. They appoint reception committees to meet new students at the trains, to assist them in finding suitable boarding places, and to aid them in various ways. The two associations publish, for free distribution, a handbook containing a map of the town, information concerning the College, and other matters of interest to students.

Once in each term the College Hall is opened for a social gathering of Faculty and students, in which music, literary exercises and friendly greeting find place.

Public lectures by prominent men of the state are provided from time to time, as opportunity offers. All are free.

LABOR AND EARNINGS.

Every encouragement is given to habits of daily manual labor during the College course. Only one hour daily practice in the industrial departments is required; but students are encouraged to make use of other opportunities for adding to their ability and means.

All labor at the College is under the direction of the superintendents of the departments, and offers opportunities for increasing skill and efficiency. In regular weekly statements, the students are required to observe business forms and principles, showing from their daily account when and where the work was performed.

The shops and offices are opened afternoons and Mondays for the accommodation of skilled students in work for their own advantage. Everywhere the student who works wins respect; and it is a matter of pride to earn one's way as far as possible.

The labor of the students in the industrial departments is a part of their education, and is not paid for. Other student labor, however, is employed upon the farm, in the gardens or the shops, and about the buildings. Such labor is paid for at rates varying with services rendered, from 8 to 10 cents an hour. The superintendents strive to adjust their work to the necessities of students and give them the preference in all tasks suitable for their employment. So far as practicable, the work of the shops and offices is turned to account for their benefit; and the increasing extent of the grounds and sample gardens brings more of such labor. The monthly pay-roll for the past year averages about $400.

Many students obtain work in the city or upon neighboring farms, and so pay part of their expenses. In these ways a few students are able to earn their way through College. The amount so earned will vary according to the tact and zeal of the student. The majority must expect to provide by earnings outside of term time, or from other sources, for the larger part of their expenses. The long summer vacation of three months offers opportunity for farm or other remunerative labor; and no one need despair of gaining an education if he has the ability to use his opportunities well.

EXPENSES.

Tuition is free to all, irrespective of residence in Kansas; and no fee for incidental or contingent expenses is charged.

The cost of text-books at the book-stores is, for the first year, about $9; for the second year, about $10; for the third year, about $13; and for the fourth year, about $15.

The expenses for apparatus and tools to each student during the course are as follows: Drawing, $4.05; microscope for botany and entomology, $1.50; case, pins, etc., for entomology, $2.25; herbarium, $1.50. The total expense for these articles during the four years is less than $10.

Board and washing are not furnished by the College. Board, with furnished room, can be procured in private families at from $2.50 to $3.50 per week, or table board in student clubs from $1.50 to $2.25 per week. Some students board themselves at even less cost; and rooms for the purpose can be obtained at a rent of from $1 to $3.50 a month. Washing costs from 50 cents to $1 a dozen pieces.

Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 a year. No institution in the state furnishes an education at less cost to the student.

NAMES AND PRICES OF TEXT-BOOKS.

First Year.

Fall Term.—Wells's Higher Algebra, edition of 1895, $1.35; Bergen's Elements of Botany, $1.25; Hitchcock's Key to Genera of Manhattan Plants, 50 cents; Walters's Free-hand Drawing, 25 cents; Sickles's Exercises in Woodworking, $1; Swinton's Word Analysis, 40 cents.

Winter Term.—Wells's Higher Algebra; Pierce's College Manual of Bookkeeping, $1; Walters's Elementary Graphics, book I, 75 cents; Emerson's Evolution of Expression.

Spring Term.—Wells's Higher Algebra; Carhart and Chute's Elementary Physics, $1.35; Genung's Outlines of Rhetoric, $1.10.

Second Year.

Fall Term.—Wentworth's New Plane and Solid Geometry, $1.35; Remsen's Introduction to the Study of Chemistry, $1.35; Newcomer's English Composition, 80 cents.

Winter Term.—Wentworth's New Plane and Solid Geometry; Walters's Elementary Graphics, book II, 75 cents; Willard's Organic Compounds of Every-day Life, $1.75; U. S. History.

Spring Term.—W. A. Noyes's Qualitative Analysis, 85 cents; Comstock's Manual for the Study of Insects, $3; Wentworth's New Plane and Spherical Trigonometry and Surveying, $1.35.

Third Year.

Fall Term.—Myers's General History, $1.65; Martin's Human Body, $1.40; Orton's Zoölogy, $1.80.

Winter Term.—Dana's Elementary Mechanics, $1.50; Hinsdale's American Government revised edition, $1.50; Le Conte's Compend of Geology, $1.25.

Spring Term.—Andrews's Institutes of Economics, $1.40; Genung's Practical Rhetoric, $1.25; Walters's Freehand Drawing, book IV, 20 cents; Analytical Geometry.

Fourth Year.

Fall Term.—Barker's Physics, $3.50; Pancoast's English Literature, $1.50.

Winter Term.—Barker's Physics; Wright's Industrial Evolution of the United States, $1; Dewey's Psychology, $1.25; Thomas and Dudley's Manual of Plant Histology, $1.50; Hitchcock's Woody Plants of Manhattan, 30 cents; Descriptive Geometry.

Spring Term.—Jevons-Hill's Logic, $1.20; Haswell's Engineer's Handbook, $3; Hodgkin's Literature Leaflets, 30 cents; Calculus.

Music Department.

Instrumental, for standard text-books and studies, from $1 to $3 per term. Vocal, from 60 cents to $2 per term.

BUSINESS DIRECTIONS.

General information concerning the College and its work, studies, examinations, grades, boarding places, etc., may be obtained from the President or the Secretary.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid from the office of the Treasurer.

All payments of principal and interest on account of bonds or land contracts must be made to the state treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. Thos. E. Will, managing editor. Subscriptions are received by Supt. Chas. S. Davis.

Donations for the library should be sent to the Librarian; donations for the museum, to the chairman of the Committee on Museums.

BARN AND SHEDS

CROSSCUP & WEST ENG. CO.
PHILA. PA.

STUDENTS JUDGING THE DAIRY CATTLE.

Applications for farmers' institutes should be addressed, as early in the season as possible, to the President or Secretary.

The Experiment Station should be addressed through the Secretary of the Station.

Graduates.

This list is made from the best data obtainable. A favor will be conferred by notifying the College Secretary of any errors or changes.

1867.

Henry L. Denison, A. M., Denver, Colo. United States court reporter.
Belle M. (Haines) Pond, A. M., Topeka, Kan. Housewife.
Emma L. (Haines) Bowen, A. M., Manhattan, Kan. Housewife.
John J. Points, A. M., Omaha, Neb. Lawyer.
Martha A. (White) Abbott, A. M., Chicago, Ill. Housewife.

1871.

Emily M. (Campbell) Robinson, A. B. Died in 1877.
Ella F. (Denison) Whedon, A. B., Lincoln, Neb. Housewife.
Luella M. Houston, A. B., Concordia, Kan. Milliner and dressmaker.
Charles O. Whedon, B. S., Lincoln, Neb. Lawyer.
Kate E. (White) Turley, A. B., Chicago, Ill. Housewife.

1872.

Theophania M. (Haines) Huntington, A. B. Died in 1880.
Albert Todd, A. M., St. Augustine, Fla. Lieutenant First U. S. artillery.
S. Wendell Williston, A. M., M. D., Lawrence, Kan. Professor of paleontology, State University.

1873.

Eliza Z. (Davis) Stringfield, A. B., Pomona, Cal. Housewife.
Sam Kimble, A. B., Manhattan, Kan. Lawyer.

1874.

Harry A. Brous, A. M., M. D., Philadelphia, Pa. Physician.
Edgar F. Clark, A. B., New Whatcom, Wash. Lawyer.
John E. Davis, B. S., D. D. S., Oakland, Cal. Dentist.
William D. Gilbert, A. B., Atchison, Kan. Lawyer.
A. Judson White, A. B., Manhattan, Kan. Minister.

1875.

Reuben E. Lofinck, B. S., Manhattan, Kan. Merchant.
Alice E. (Stewart) Points, A. M., Matawan, N. J. Teacher.

1876.

George A. Gale, A. B., Mangona, Fla. Merchant.
Ella M. (Gale) Kedzie, A. B., Lansing, Mich. Teacher of art.
Nellie (Sawyer) Kedzie, M. S., Peoria, Ill. Professor of household economy and hygiene, Bradley Polytechnic Institute.
Carrie M. Kimball, A. B., Garden Grove, Cal. Art instructor.
Minerva E. (Whitman) Heiser, A. B., Lyndon, Kan. Housewife.

1877.

Ella S. Child, B. S., Manhattan, Kan. Dressmaker.
George H. Failyer, M. S., Manhattan, Kan. Professor of Chemistry, Kansas State Agricultural College.
John S. Griffing, M. S., Topeka, Kan. Merchant.
Walter C. Howard, B. S., Truckee, Cal. Minister.
Frederick O. Hoyt, B. S., Died in 1881.
Louis E. Humphrey, B. S., Chapman, Kan. Druggist.
James F. La Tourette, B. S., Idaho Springs, Colo. Miner.
Marion F. Leasure, B. S., LL. B., La Cygne, Kan. Lawyer.
William Ulrich, M. S., Manhattan, Kan. Contractor and builder.

1878.

Albert N. Godfrey, M.S., ———, Wash. Farmer and fruit-grower.
Charles S. McConnell, B.S., Kansas City, Mo. Printer.
Geo. S. Platt, B.S. Died in 1878.
Amos E. Wilson, B.S., Leavenworth, Kan. Banker.

1879.

Arthur T. Blain, B.S., Lacanada, Cal. Nurseryman.
Etta (Campbell) Blain, B.S., Lacanada, Cal. Housewife.
Wilmer K. Eckman, B.S., Logansport, La. Lumber dealer.
Corvin J. Reed, B.S., St. Clere, Kan. Farmer.
Harry C. Rushmore, B.S., Topeka, Kan. Traveling salesman.
Wm. H. Sikes, B.S., Leonardville, Kan. Merchant and grain dealer.
Lewis A. Salter, B.S., Alva, O. T. Lawyer.
Ella (Vincent) McCormick, B.S., Clay Centre, Kan. Bookkeeper.
Clarence E. Wood, B.S., A.B., Erwin, O. T. Farmer.

1880.

Augustine Beacham, B.S., Seattle, Wash. Principal of schools.
Lizzie R. (Cox) Kregar, B.S., Milford, Kan. Housewife.
Emma (Hoyt) Turner, B.S., Cloquet, Wis. Housewife.
Emma (Knostman) Huse, B.S., Arkansas City, Kan. Housewife.
Grace (Parker) Perry, B.S., Pocatello, Idaho. Housewife.
Noble A. Richardson, B.S., San Bernardino, Cal. Principal of high school.
Maria E. (Sickels) Davis, B.S., Chicago, Ill. Housewife.

1881.

Flora (Donaldson) Reed, B.S., St. Clere, Kan. Housewife.
Ulysses G. Houston, B.S., Concordia, Kan. Lecturer.
Fletcher M. Jeffrey, B.S., Cripple Creek, Colo. Lawyer.
William J. Jeffrey, B.S., Boston, Mass. Law student, Boston University.
Darwin S. Leach, B.S., ———, Africa.
William J. Lightfoot, B.S., Cripple Creek, Colo. Deputy United States mineral surveyor.
Dalinda (Mason) Cotey, B.S., Logan, Utah. Professor of domestic economy, Utah Agricultural College.
Wirt S. Myers, B.S., Tampa, Fla. Furniture manufacturer.

1882.

J. Chester Allen, B.S. Died in 1885.
Ida (Cranford) Sloan, B.S., Stillwater, Cal. Housewife.
Edward V. Cripps, B.S., ———.
Warren Knaus, M.S., McPherson, Kan. Editor and postmaster.
Mattie E. (Mails) Coons, B.S., Manhattan, Kan. Housewife.
Allie S. (Peckham) Cordry, B.S., Minneapolis, Kan. Housewife and art teacher.
Belle (Selby) Curtice, B.S., Kansas City, Mo. Housewife.
Burton L. Short, B.S., Kansas City, Kan. City clerk.
John A. Sloan, B.S., Stillwater, Cal. Farmer and nurseryman.

1883.

James W. Berry, B.S., Jewell City, Kan. Farmer, contractor, and builder.
Mary C. Bower, B.S., Manhattan, Kan. Clerk.
Lewis W. Call, B.S., LL.M., Washington, D.C. Chief clerk, judge-advocate general's office, U.S. war department.
Emma E. Glossop, B.S., Ithaca, N.Y. Student, Cornell University.
William J. Griffing, B.S., Manhattan, Kan. Farmer and fruit-grower.
Phœbe E. Haines, M.S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Hortense L. (Houston) Martin, B.S., Concordia, Kan. Housewife.
Jacob Lund, M.S., Manhattan, Kan. Fireman and steam fitter, Kansas State Agricultural College.
Katie I. (Meguire) Sheldon, B.S., Riverside, Cal. Housewife.
J. Dana Needham, B.S., Lane, Kan. Merchant.
Milan T. Ward, B.S., M.D., Orion, Ill. Physician.
Julius T. Willard, M.S., Manhattan, Kan. Professor of Applied Chemistry, Kansas State Agricultural College.

1884.

Emmett S. Andress, B. S., Lakin, Kan. Farmer.
Florence J. Brous, B. S., Kansas City, Kan. Teacher.
Bartholomew Buchli, M. S., D. V. S., Alma, Kan. Teacher and farmer.
John H. Calvin, B. S., LL. B., Topeka, Kan. Lawyer.
Wm. A. Corey, B. S., Salt Lake City, Utah. Teacher and editor.
Henry M. Cottrell, M. S., Manhattan, Kan. Professor of Agriculture, Kansas State Agricultural College.
Carrie F. (Donaldson) Brown, B. S., Portland, Ore. Housewife.
Florence A. Donaldson, B. S. Died in August, 1888.
Frank W. Dunn, B. S., Lawrence, Colo. Miner.
I. Day Gardiner, B. S., Wakefield, Kan. Farmer.
Edwin H. Kern, B. S., Cripple Creek, Colo. Mining engineer.
Marion M. Lewis, B. S., Portland, Ore. Minister.
Charles L. Marlatt, M. S., Washington, D. C. First assistant in entomological division, United States department of agriculture.
Lincoln H. Neiswender, B. S., Silver Lake, Kan. Farmer.
Geo. C. Peck, B. S., Junction City, Kan.
Hattie L. (Peck) Berry, B. S., Jewell City, Kan. Housewife.
John W. Shartel, B. S., Guthrie, O. T. Lawyer.

1885.

Thomas Bassler, B. S., Batchelder, O. T. Miller.
Albert Deitz, B. S., Kansas City, Mo. Merchant.
George E. Hopper, M. S., Arkansas City, Kan. Superintendent of water-works.
Florence F. Hough, B. S., Melrose, Iowa.
Frank A. Hutto, B. S., Stillwater, O. T. Lawyer.
Allen Lewis, B. S., Chicago, Ill. Civil engineer.
Nellie J. Murphy, B. S., South Denver, Colo. Trained nurse.
Arthur L. Noyes, B. S., Wabaunsee, Kan. Farmer.
Clarence D. Pratt, B. S., Dallas, Tex. General agent paint company.
Rollin R. Rees, B. S., Minneapolis, Kan. County attorney.
Frederick J. Rogers, M. S., Ithaca, N. Y. Instructor in physics, Cornell University.
Dorothy E. C. (Secrest) Hungerford, B. S., Randolph, Kan. Housewife.
Grace Wonsetler, B. S., Verbeck, Kan. Teacher.
Effie E. (Woods) Shartel, B. S., Guthrie, O. T. Housewife.

1886.

Lillie B. Bridgeman, M. S., San Diego, Cal. Teacher of science.
Louis P. Brous, M. S., Kansas City, Kan. Teacher of drawing.
Paul H. Fairchild, B. S., M. D., New York, N. Y. Publisher of medical journals.
Abbott M. Green, B. S., Adin, Cal. Civil engineer and teacher.
James G. Harbord, M. S., Fort McIntosh, Tex. Lieutenant Fifth cavalry, U. S. A.
John U. Higinbotham, B. S., Chicago, Ill. Cashier biscuit manufacturing company.
Maria C. (Hopper) Getty, B. S., Downs, Kan. Housewife.
E. Ada (Little) MacEwan, B. S., Logan, Utah. Housewife.
Frank L. Parker, B. S., Atchison, Kan. Merchant.
Edward H. Perry, B. S., Perry, O. T. Editor and publisher.
H. Augustus Platt, B. S., Guthrie, O. T. Editor.
Ada H. (Quinby) Perry, B. S., Perry, O. T. Housewife.
Ida H. (Quinby) Gardiner, Wakefield, Kan. Housewife.
Minnie Reed, M. S., San Diego, Cal. Teacher of science.
David G. Robertson, B. S., Chicago, Ill. Lawyer.
Edward O. Sisson, B. S., Chicago, Ill. Principal South Side school. President elect Bradley Polytechnic Institute, Peoria, Ill.
John W. Van Deventer, B. S., Sterling, Colo. Editor and publisher.
George W. Waters, B. S., Dillon, Colo. Teacher.
William E. Whaley, B. S., Chicago, Ill. Instructor in history, South Side school.
F. Henrietta (Willard) Calvin, B. S., Topeka, Kan. Housewife.
John L. Wise, B. S., Smithboro, Ill. Merchant.

1887.

Edgar A. Allen, B. S., Albuquerque, N. M. Superintendent of Indian school.
Fred H. Avery, B. S. Died in 1896.
Claude M. Breese, M. S., Manhattan, Kan. Assistant in chemistry, Kansas State Agricultural College.

John B. Brown, M. S., Hoyt, Kan. Superintendent of Indian school.
Walter J. G. Burtis, B. S., Fredonia, Kan. Farmer.
Mark A. Carleton, M. S., Washington, D. C. Assistant in division of vegetable pathology, U. S. department of agriculture.
Nellie E. (Cottrell) Stiles, B. S., Lakeside, Cal. Housewife.
Bert R. Elliott, B. S., Los Angeles, Cal. Conductor on street-car line.
Frederick B. Elliott, B. S., Manhattan, Kan. Real-estate and insurance agent.
Clara M. Keyes, B. S., Warner, Cal. Teacher.
Fred. G. Kimball, B. S., Hastings, Neb. Railway postal clerk.
Frederick A. Marlatt, B. S., Manhattan, Kan. Assistant in entomology, Experiment Station, Kansas State Agricultural College.
William J. McLaughlin, B. S., Bern, Kan. Teacher and editor.
Mary E. Moses, B. S., Manhattan, Kan. At home.
Charles A. Murphy, B. S., Kingman, Kan. Superintendent of schools.
Orlando G. Palmer, B. S., LL. M., Perry, O. T. Superintendent of schools.
Louis B. Parker, B. S. Died in 1889.
James E. Payne, M. S., Cheyenne Wells, Colo. Superintendent college raiubelt experiment station.
Seward N. Peck, B. S., Topeka, Kan. Cabinet-maker, railroad shops.
George N. Thompson, B. S., Belmond, Iowa. Mechanic.
Willis M. Wright, B. S., Jennings, La. Farmer.

1888.

Grant Arnold, B. S., Toledo, Wash. Teacher.
Bertha H. Bacheller, M. S., Kansas City, Mo. Teacher of domestic economy.
Clement G. Clarke, B. S., New Haven, Conn. Instructor, Yale University.
Alexander C. Cobb, B. S., Wagoner, I. T. Farmer and carpenter.
Mattie (Cobb) Clarke, B. S., New Haven, Conn. Housewife.
Minnie H. Cowell, B. S., Cairo, Egypt. Hospital nurse.
Lyman H. Dixon, B. S., Buffalo, N. Y. Architect.
David G. Fairchild, M. S. Botanist.
Carl E. Friend, B. S., Soldier, Kan. Banker.
John R. Harrison, B. S., Salina, Kan. Inspector of post-offices.
Humphrey W. Jones, B. S., Alma, Kas. Principal of schools.
Nathan E. Lewis, B. S., Philadelphia. Architect.
Abbie L. Marlatt, M. S., Providence, R. I. Teacher of domestic science, manual training high school, Providence, R. I.
William C. Moore, B. S., Junction City, Kan. Editor and publisher.
Ernest F. Nichols, B. S., Hamilton, N. Y. Professor of physics, Colgate University.
Harry E. Robb, B. S., Eureka, Kan. Farmer and county surveyor.
Anna Snyder, B. S., Emporia, Kan. Student, State Normal School.
Edwin H. Snyder, B. S., Highlands, Colo. Editor.
Oliver L. Utter, B. S., Boston, Mass. Student, University School of Theology. Minister.
Aaron Walters, B. S. Died in 1892.
Lora L. Waters, M. S., Manhattan, Kan. Teacher.
Daniel W. Working, jr., B. S., Denver, Colo.

1889.

Emma A. Allen, B. S. Died in 1891.
Joseph W. Bayles, B. S., Ottawa, Kan. Student of theology.
Walter R. Browning, B. S., Padonia, Kan. Grain dealer.
David E. Bundy, B. S., Leavenworth, Kan. Minister.
Samuel S. Cobb, B. S., Wagoner, I. T. Druggist and postmaster.
Judson H. Criswell, B. S., Manhattan, Kan. Farmer, and post-graduate student, Kansas State Agricultural College.
Mattie I. (Farley) Carr, B. S., Winthrop, Wash. Housewife.
Clarence E. Freeman, M. S., Chicago, Ill. Special student in electricity, Armour Institute, Chicago, Ill.
Hattie L. (Gale) Sanders, B. S., Mangona, Fla. Housewife.
John S. Hazen, B. S., Des Moines, Iowa. United States weather bureau observer.
Albert B. Kimball, B. S., Scandia, Kan. Editor and postmaster.
William Knabb, B. S., Hiawatha, Kan. Bank clerk.
Mary C. Lee, B. S., Kansas City, Mo. Housekeeper.
Alonzo A. Mills, B. S., Kamas, Utah. Manager of creamery.
Susan W. Nichols, B. S., St. Joseph, Mo. Music teacher.

Walter H. Olin, M. S., Ottawa, Kan. Superintendent of schools.
Eli M. Paddleford, B. S., Boston, Mass. Student, University School of Theology.
Maude F. Sayers, B. S., Ottawa, Kan. Bookkeeper.
Florine (Secrest) Linderman, Willow Glen, San Jose, Cal. Housewife.
Stanley Snyder, B. S., Oskaloosa, Kan. Farmer.
Charles W. Thompson, B. S., Holton, Kan. Dentist.
Jane C. Tunnell, B. S., Mt. Carroll, Ill. Teacher.
Ina M. (Turner) Bruce, B. S., St. Louis, Mo. Housewife.
Robert U. Waldraven, B. S., Rosedale, Kan. Minister.
Henry S. Willard, B. S., M. D., Topeka, Kan. Assistant superintendent state insane asylum.

1890.

Samuel I. Borton, B. S., Virgil, Kan. Teacher.
Frank A. Campbell, B. S., Highlands, Colo. Reporter.
Arthur F. Cranston, B. S., Parsons, Kan. Lawyer.
John Davis, B. S., Blackwell, O. T. Teacher.
Grant W. Dewey, B. S., Manhattan, Kan. Photographer.
Charles J. Dobbs, B. S., Topeka, Kan. Lawyer.
Charles W. Earle, B. S., Denver, Colo. Advertising agent.
Schuyler C. Harner, B. S., Lasita, Kan. Teacher and farmer.
John W. Ijams, B. S., Orlando, O. T. Teacher.
Bertha S. Kimball, M. S., Manhattan, Kan. Post-graduate student and microscopic draughtsman, Kansas State Agricultural College.
Harriet E. (Knipe) Curtis, B. S., Hamilton, Mo. Housewife.
Nellie P. (Little) Dobbs, B. S., Topeka, Kan. Housewife.
Ellsworth Thomas Martin, B. S., LL. B., Chicago, Ill. Lawyer.
Silas C. Mason, M. S., Manhattan, Kan. Professor of Horticulture, Kansas State Agricultural College.
Wilton L. Morse, B. S., Mancos, Colo. Farmer.
Albert E. Newman, B. S., Watonga, O. T. County superintendent and editor.
Julia R. Pearce, B. S., Manhattan, Kan. Librarian, Kansas State Agricultural College.
Emil C. Pfuetze, B. S., Burlington, Kan. Superintendent of water-works.
William H. Sanders, B. S., Mangona, Fla. Plumber and builder.
Emma Secrest, B. S., Randolph, Kan. Teacher.
Marie Barbara Senn, M. S., Fargo, N. D. Instructor in domestic economy, State Agricultural College.
Ralph Snyder, B. S., Oskaloosa, Kan, Farmer and teacher.
George E. Stoker, B. S., A. B., Topeka, Kan. Lawyer.
Walter T. Swingle, M. S., Eustis, Fla. Assistant in division of vegetable pathology, department of agriculture.
Gilbert J. Van Zile, B. S., Carthage, Ill. Lawyer.
Harry N. Whitford, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Thomas E. Wimer, B. S. Died in 1890.

1891.

William Aaron Anderson, Leonardville, Kan. Bookkeeper.
William Sherman Arbuthnot, B. S., D. V. S., Republic, Kan. Veterinary surgeon and druggist.
Herman William Avery, B. S., Wakefield, Kan. Farmer and merchant.
Judd Noble Bridgman, M. S., Atchison, Kan. Bicycle dealer.
Robert James Brock, B. S., Manhattan, Kan. Lawyer.
Francis Charles Burtis, M. S., Manhattan, Kan. Assistant in agriculture, Experiment Station, Kansas State Agricultural College.
Charles Albert Campbell, B. S., Providence, R. I. Minister.
Spencer Norman Chaffee, B. S., Riley, Kan. Teacher.
Ephraim Clay Coburn, B. S., Kansas City, Kan. Student of medicine.
Gertrude Coburn, B. S., Ames, Iowa. Professor of household economy, Iowa State Agricultural College.
Tina Louise Coburn, B. S., Topeka, Kan. Clerk in office of secretary of the state board of agriculture.
Rachel Callie (Conwell) Thoburn, B. S., Syracuse, Kan Housewife.
Christine Mossman Corlett, B. S., Guthrie, O. T. Teacher.
Mary Emmeline (Cottrell) Payne, M. S., Cheyenne Wells, Colo. Housewife.
Phil Sheridan Creager, B. S., Kansas City, Mo. Editor.
Kary Cadmus Davis, B. S., Austin, Minn. Principal state high school.
Thomas Clarke Davis, B. S., Benedict, Kan. Farmer and member of legislature.

Helen Pearl (Dow) Peck. B. S., 756 Jefferson avenue, Brooklyn, N. Y. Housewife.
Anna (Fairchild) White, B. S., Cambridge, Mass. Housewife.
Harry Benson Gilstrap, B. S., Chandler, O. T. Editor and publisher.
Almon Arthur Gist, B. S., Fort Riley, Kan. Telegraph operator and station agent.
Amy Myrtle Harrington, B. S., Manhattan, Kan. Teacher.
Delpha May Hoop, B. S., Manhattan, Kan. Teacher.
Mayme Amelia (Houghton) Brock, B. S., Manhattan, Kan. Housewife.
Willis Wesley Hutto, B. S., Manhattan, Kan. Teacher.
George Victor Johnson, B. S., Sedan, Kan. Editor.
Frank Mullett Linscott, B. S., D. V. S., Hiawatha, Kan. Stock-raiser.
Bessie Belle Little, B. S., Topeka, Kan. Teacher of physical culture.
Albert Edward Martin, B. S., Streator, Ill. Manager telephone company.
Nellie Evangeline (McDonald) Thayer, B. S., Lawrence, Kan. Housewife.
David Collins McDowell, B. S., Cripple Creek, Colo. Miner.
Alfred Midgley, B. S., Minneapolis, Kan. Clerk.
Madeleine Wade Milner, B. S., Chicago, Ill. Assistant librarian, Armour Institute.
Paul Chambers Milner, B. S., Chicago, Ill. Assistant exchange teller, Illinois Trust and Savings Bank.
Harry Elbridge Moore, B. S., Kansas City, Mo. Bookkeeper.
John Otis Morse, B. S., Mound City, Kan. Farmer and teacher.
Hattie May Noyes, B. S., Wabaunsee, Kan. Teacher.
Louise Reed, B. S., San Diego, Cal. Principal of kindergarten.
Artemus Jackson Rudy, B. S., Fresno, Cal. Fruit raiser.
Henry Vernon Rudy, B. S., Fresno, Cal. Fruit raiser.
Lottie Jane Short, M. S., Manhattan, Kan. Assistant in household economics, Kansas State Agricultural College.
Ben Skinner, B. S., M. D., Granada, Kan. Physician.
Caroline Scott (Stingley) Van Blarcom, B. S., Kansas City, Kan. Housewife.
Lillian Alice St. John, B. S., Manhattan, Kan. Teacher.
Ellis Cheney Thayer, B. S., Lawrence, Kan. Teacher, Haskell Institute.
Sam L. Van Blarcom, B. S., Kansas City, Kan. Railway postal clerk.
Frank Albert Waugh. M. S., Burlington, Vt. Professor of horticulture in Vermont University.
Fannie Elizabeth (Waugh) Davis, B. S., Austin, Minn. Housewife.
Flora Emilie Wiest, B. S., Manhattan, Kan. Teacher.
Bertha Winchip, B. S., Manhattan, Kan. Dressmaker.
Alfred Orin Wright, B. S., Lake Arthur, La. Editor.
Effie Jeanetta Zimmerman, M. S., Moray, Kan. At home.

1892.

Grace Maria Clark, M. S., Manhattan, Kan. At home.
George L. Clothier, B. S., Manhattan, Kan. Assistant in botany, Experiment Station, Kansas State Agricultural College.
Lillian Clyde Criner, B. S., McPherson, Kan. Editor.
Harry Darnell, B. S., Gardner, Kan. Teacher.
William H. Edelblute, B. S., Farmington, Wash. Teacher.
Elizabeth Edwards, B. S., Manhattan, Kan. Teacher.
John Frost, B. S., Blue Rapids, Kan. Teacher.
Effie (Gilstrap) Frazier, B. S., Chandler, O. T. Editor and publisher.
Ava (Hamill) Tillotson, B. S., Hill City, Kan. Housewife and post-graduate student, Kansas State Agricultural College.
J N Harner, B. S., Corinth, Miss. Teacher.
Loyall S. Harner, B. S., Junction City, Kan. Farmer.
Charles Pinckney Hartley, B. S., Manhattan, Kan. Horticulturist.
John William Abraham Hartley, B. S., Manhattan, Kan. Teacher and horticulturist.
James Laird McDowell, B. S., Cripple Creek, Colo. Miner.
Robert A. McIlvaine, B. S., Emporia, Kan. Student, State Normal School.
Kate (Oldham) Sisson, B. S., Toronto, Canada. Housewife.
Daniel Henry Otis, M. S., Manhattan, Kan. Assistant in agriculture, Experiment Station, Kansas State Agricultural College.
Ivan Bryan Parker, B. S., M. D., Hill City, Kan. Physician.
Warner S. Pope, B. S., Kansas City, Kan. Lawyer.
Burton Homer Pugh, B. S., Oakland, Kan. Farmer.
Elias W. Reed, B. S., Avoca, Kan. Farmer.
Robert Stirling Reed, B. S., Emporia, Kan. Student, State Normal School.
Arthur Daniel Rice, B. S., Lamar, Colo. Minister.

Fred. C. Sears, M. S., Tescot, Kan. Farmer.
Birdie E. Secrest, B. S., Randolph, Kan. Clerk.
May Secrest, B. S., Randolph, Kan. Teacher.
Ruth Tipton Stokes, M. S., Toledo, O. Instructor in sewing, Toledo Manual Training School.
Harry W. Stone, B. S., Portland, Ore. General secretary Y. M. C. A.
Walter Percival Tucker, B. S., Ben Davis, Ind. Student.
Mary Alice (Vail) Waugh, B. S., Burlington, Vt. Housewife.
Robert Lynn Wallis, B. S. Died in 1895.
Ora Rebecca (Wells) Traxler, B. S., Waterville, Kan. Housewife.
Daniel F. Wickman, B. S., Topeka, Kan. Market-gardener and clerk in Santa Fe offices.
George Washington Wildin, B. S., Chicago, Ill. Assistant superintendent Aermotor Company.
Charles Ernest Yeoman, B. S., La Crosse, Kan. Clerk of district court.

1893.

Edmund Clarence Abbott, B. S., Trinidad, Colo. Lawyer.
Edwin McMaster Stanton Curtis, B. S., Detroit, Mich. Clerk in railroad office.
Corinne Louise (Daly) Burtis, B. S., Manhattan, Kan. Housewife.
Laura Greeley Day, B. S., Menominee, Wis. Instructor in household economy, Stout Manual Training School.
Ione (Dewey) Earle, B. S., Manhattan, Kan. At home.
Albert Dickens, B. S., Bushton, Kan. Teacher.
Mary Maud Gardiner, M. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Susie (Hall) Linscott, B. S., Hiawatha, Kan. Housewife.
Mary Frances Burgoyne Harman, B. S., Valley Falls, Kan. Teacher.
Ivy Frances Harner, M. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Margaretha Elise Horn, B. S., Detroit, Mich. Teacher of sciences, Detroit High School.
Marcia Ione Hulett, B. S., Kirksville, Mo. Student, school of osteopathy.
Mac F. Hulett, B. S., Kirksville, Mo. Student, school of osteopathy.
Fred Hulse, B. S., Keats, Kan. Farmer.
Charles Augustus Kimball, B. S., Junction City, Kan. Lawyer.
Maud Ethel Knickerbocker, B. S., Terraville, S. D. Teacher.
Thomas Eddy Lyon, B. S., Zeandale, Kan. Teacher.
William Otis Lyon, B. S., Emporia, Kan. Student, State Normal School.
McLeod Wilson McCrea, B. S., Bostwick, Neb. Teacher.
Rose Edith McDowell, B. S., Manhattan, Kan. At home.
George Lane Melton, B. S., Winfield, Kan. Insurance and loan agent.
Eusebia DeLong Mudge, B. S., Eskridge, Kas. Bookkeeper.
Nora (Newell) Hatch, B. S., Manhattan, Kas. Housewife.
August Fred. Niemoller, B. S., Stitt, Kan. Teacher.
Susie Amanda Noyes, B. S. Died in 1894.
Henry Leamer Pellett, B. S., Kirksville, Mo. Student, school of osteopathy.
Charles John Peterson, B. S., Emporia, Kan. Student, State Normal School.
Carl Frederic Pfuetze, B. S., Kansas City, Mo. Railway postal clerk.
John Dewitt Riddell, B. S., M. D., Enterprise, Kan. Physician.
John Albert Rokes, B. S., Holton, Kan. Law student.
Agnes (Romick) Edgar, B. S., Halford, Kan. Housewife.
Fred. Raymond Smith, B. S., Manhattan, Kan. Lawyer.
George Wildman Smith, B. S., Minneapolis, Kan. Principal of high school.
William Elmer Smith, B. S., Manhattan, Kan. Teacher.
John Eugene Thackrey, B. S., Greencastle, Ind. Student, DePauw University. Minister.
Joseph B. Thoburn, B. S., Syracuse, Kan. Irrigation farmer and horticulturist.
Charles Henry Thompson, Columbia, Mo. Instructor in botany, State University.
George K. Thompson, B. S., Blue Rapids, Kan. Editor.
William James Yeoman, B. S., Kinsley, Kan. Principal of schools.

1894.

Frank Weber Ames, B. S., Morgan Park, Ill. Clerk.
Clara Francelia Castle, M. S., Manhattan, Kan. Post-graduate student, Kansas State Agricultural College.
George Luther Christensen, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
John Cornelius Christensen, B. S., Marindahl, Kan. Farmer.

Lorena Estella Clemons, B. S., Manhattan, Kan. Clerk in Secretary's office and post-graduate student, Kansas State Agricultural College.
Martha Cottrell, B. S., Wabaunsee, Kan. At home.
Sarah Esther (Cottrell) Wright, B. S., Jennings, La. Housewife.
Alverta May Cress, B. S., Manhattan, Kan. Clerk in office of register of deeds.
Fannie Jane Cress, B. S., Dayton, Ohio. Student normal school.
Ernest A. Donaven, B. S., M. D., Goodrich, Kan. Physician.
Jephthah W. Evans, B. S., Emporia, Kan. Student, State Normal School.
Isabelle Russell Frisbie, B. S., Brookings, S. D. Professor of domestic economy, State Agricultural College.
Eugene Leonard Frowe, B. S., Louisville, Kan. Farmer and teacher.
Walter Harling, B. S., Echo, Utah. Teacher.
Lorena Marguerite Helder, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Mark V. Hester, B. S., Lawrence, Kan. Student, State University.
Charles Ross Hutchings, B. S., Pomona, Kan. Farmer and teacher.
Isaac Jones, jr., B. S., Ada, Kan. Farmer.
Stella Victoria Kimball, B. S., Manhattan, Kan. Teacher and post-graduate student, Kansas State Agricultural College.
Mary Eliza Lyman, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
William Henry Moore, B. S., Manhattan, Kan. Horticulturist and post-graduate student, Kansas State Agricultural College.
Sarah (Moore) Foster, B. S., Mont Ida, Kan. Housewife.
James Francis Odle, B. S., Kalamazoo, Mich. Herdsman, Austin Jersey farm.
Charles Randolph Pearson, B. S., Hoxie, Kan. County superintendent.
Horace Greeley Pope, B. S., Lawrence, Kan. Student, State University.
Minnie Louisa Romick, Niles, Kan. Teacher.
Winnie Luella (Romick) Chandler, B. S., Argentine, Kan. Housewife.
Victor Irvin Sandt, B. S., Reedsville, Kan. Teacher.
John Alfred Scheel, B. S., Dickinson, N. D. Farmer.
Jacob Ulrich Secrest, B. S., Randolph, Kan. Farmer.
Charles Chrisfield Smith, B. S., Wabaunsee, Kan. Principal of schools.
Jennie Ruth Smith, B. S., Manhattan, Kan. Teacher.
Wesley Ohio Staver, B. S., Kansas City, Mo. Lawyer.
John Stingley, B. S., Kansas City, Mo. Undertaker.
John Edwin Taylor, B. S. Died in 1896.
Delbert L. Timbers, B. S., Beloit, Kan. Teacher.
Phebe Carey Turner, B. S., Maple Hill, Kan. At home.
Samuel Robert Vincent, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Lucy Helena Waters, B. S., Manhattan, Kan. Teacher.

1895.

Edward Jones Abell, B. S., Scandia, Kan. Principal of schools.
Carl D. Adams, B. S., Olathe, Kan. Teacher, asylum for deaf and dumb.
Robert John Barnett, B. S., Emporia, Kan. Student, State Normal School.
Burton Wesley Conrad, B. S., Capioma, Kan. Farmer.
Florence Ruth Corbett, B. S., Manhattan, Kan. Teacher.
Sid Henry Creager, B. S., journalist, Kansas City, Mo.
Elsie Emeline Crump, B. S., Manhattan, Kan. Teacher.
David Thomas Davies, B. S., Manhattan, Kan. Farmer.
Frank Andrew Dawley, B. S., Waldo, Kan. Farmer and teacher.
Daisy Day, M. S., Manhattan, Kan. Post-graduate student, Kansas State Agricultural College.
Flora Day, B. S., Manhattan, Kan. At home.
George Adam Dean, B. S., Topeka, Kan. Farmer.
Lillie Christena Dial, B. S., Cleburne, Kan. At home.
Lucy Ellis, B. S., Topeka, Kan. Teacher.
Victor Emrick, B. S., Manhattan, Kan. Teacher.
George Forsyth, B. S., Franklin, Ind. Agent.
Ernest Harrison Freeman, B. S., Emporia, Kan. Student, State Normal School.
Florence Eleanor Fryhofer, B. S., Randolph, Kan. Teacher.
George William Fryhofer, B. S., Chicago, Ill. Student, Kent Law School.
Oscar Hugo Halstead, B. S., Louisville, Kan. Teacher.
Hortensia Harman, B. S., Valley Falls, Kan. At home.

John Bright Harman, Valley Falls, Kan. Farmer.
Clarence V. Holsinger, B. S., Rosedale, Kan. Fruit raiser.
Christian Andrick Johnson, B. S., Success, Kan. Farmer.
John James Johnson, B. S., Success, Kan. Farmer and teacher.
Fred. Ralph Jolly, B. S., Manhattan, Kan. Printer.
William Irvin Joss, B. S., Fairview, Kan. Teacher.
Maud Estella Kennett, B. S., Emporia, Kan. Student, State Normal School.
Myron Arthur Limbocker, B. S., Kansas City, Kan. Lawyer.
Samuel Alexander McDowell, B. S., Manhattan, Kan. Clerk.
Laura Sarah (McKeen), Smith, B. S., Russell, Kan. Housewife.
Theo. Wattles Morse, M. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Oscar Albert Otten, B. S., Pierce Junction, Kan. Telegraph operator.
William Hackworth Painter, B. S., Meade, Kan. Farmer.
Charles Wesley Pape, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Ethel Patten, B. S., Silver Lake, Kan. Teacher.
John Vernon Patten, B. S., Silver Lake, Kan. Farmer.
William H. Phipps, B. S., Abilene, Kan. Principal grammar school.
Alice Julia Quintard, B. S., Silver Lake, Kan. At home.
Frederick Ellsworth Rader, B. S., Manhattan, Kan. Teacher.
Ralph Waldo Rader, B. S., Manhattan, Kan. Farmer.
Ada Rice, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Benjamin Franklin Simeon Royer, B. S., St. Joseph, Mo. Student of medicine.
Charles Baxter Selby, B. S., Marion, Va. Law student.
Mabel Gertrude Selby, B. S., Enid, O. T. Teacher.
Ernest P. Smith, B. S., Manhattan, Kan. Farmer and mechanic.
Frederick John Smith, B. S., Russell, Kan. Editor.
Kitty Myrtle Smith, B. S., Manhattan, Kan. At home.
Marietta Smith, B. S., Manhattan, Kan. At home.
William Henry Steuart, B. S., Victor, Colo. Mining engineer.
Cora Idella Stump, B. S., Manhattan, Kan. Teacher.
Dora (Thompson) Winter, B. S., Blue Rapids, Kan. Housewife.
Elven Creveling Trembly, B. S., Comiskey, Kan. Farmer.
George Carpenter Wheeler, B. S., Boston, Mass. Restaurant.
Mary Elizabeth Willard, B. S., Wamego, Kan. Teacher.
Olive Mabel (Wilson) Holsinger, B. S., Rosedale, Kan. Housewife.
Ora Gertrude Yenawine, B. S., Manhattan, Kan. At home.

1896.

May Haines Bowen, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Con Morrison Buck, B. S., Manhattan, Kan. Assistant in graphics, Kansas State Agricultural College.
Margaret Isaphene (Carleton) Doane, B. S., Milwaukee, Wis. Housewife.
William Annesley Cavenaugh, B. S., Fort Leavenworth, Kan. In United States army.
William Arthur Coe, B. S., Coloma, Kan. Farmer.
Charlotte Mabel (Cotton) Smith, B. S., Manhattan, Kan. Housewife.
Ernest Brown Coulson, B. S., Anthony, Kan. Deputy in county clerk's office.
George Henry Dial, B. S., Cleburne, Kan. Teacher and farmer.
Charles Francis Doane, B. S., Milwaukee, Wis. Agricultural editor.
John Berthold Dorman, B. S., Greenfield, N. Y. Teacher.
Bradford Dougherty, B. S., Kansas City, Kan. Collector.
Charles Silar Evans, B. S., Fort Assiniboine, Mont. Hospital steward.
Robert Kilby Farrar, B. S., Axtell, Kan. Teacher.
George William Finley, B. S., Manhattan, Kan. Teacher.
Joanna Freeman, B. S. Died in 1897.
John Jacob Fryhofer, B. S., Randolph, Kan. Farmer.
Elmer George Gibson, B. S., Willard, Kan. Teacher.
George Clifton Hall, B. S., Hoyt, Kan. Teacher.
Alonzo Charles Havens, B. S., Manhattan, Kan. Farmer.
Gertrude Julia (Havens) Norton, B. S., St. Louis, Mo. Housewife.
Lawrence Wilbur Hayes, B. S., Topeka, Kan. Attendant, asylum for insane.

John Warren Holland, B. S., Montpelier, Idaho.
Henry George Johnson, B. S., Assaria, Kan. Farmer.
Susan Effie Johnson, B. S., Success, Kan. Teacher.
Marion Elizabeth Jones, B. S., Manhattan, Kan. Post-graduate student, Kansas State Agricultural College.
Thomas Lormar Jones, B. S., Topeka, Kan. Attendant, asylum for insane.
Edward Clarence Joss, B. S., Fairview, Kan. Merchant.
Royal S. Kellogg, B. S., Russell, Kan. Teacher.
Mark Kirkpatrick, B. S., Antlers, I. T. United States geological survey.
Edith Lynette Lantz, B. S., Manhattan, Kan. At home.
Sue Long, B. S., Manhattan, Kan. Local editor.
Charles W. Lyman, B. S., Manhattan, Kan. Clerk.
Charles Dwin McCauley, B. S., Topeka, Kan. Farmer.
Charles Sumner Marty, B. S., Merriam, Kan. Farmer.
Mrs. Elda Lenore Moore, B. S., Manhattan, Kan. Housewife.
Arthur Houston Morgan, B. S., Hillside, Kan. Farmer and teacher.
Clara Verena Newell, B. S., Manhattan, Kan. Clerk.
Ellen Elizabeth Norton, B. S., Manhattan, Kan. At home.
John Bitting Smith Norton, B. S., St. Louis, Mo. Assistant in Missouri botanical garden.
Hattie A. Paddleford, B. S., Randolph, Kan. Teacher.
Mary Kerilla Painter, B. S., Meade, Kan. Teacher.
Elva Luthera (Palmer) Thackrey, B. S., Greencastle, Ind. Housewife.
Inez Luella (Palmer) Barrows, B. S., Washington, Kan. Housewife.
Fannie Parkinson, B. S., Pomona, Kan. Teacher.
Archie Carpenter Peck, B. S., Big Valley, Tex. Manager and proprietor of cotton-gin.
Arthur Louis Peter, B. S., Denver, Colo. Student, homeopathic college.
Charles Edwin Pincomb, B. S., Hector, Kan. Farmer.
Mary Josephine Pincomb, B. S., Hector, Kan. At home.
John Poole, B. S., Briggs, Kan. Farmer.
Edgar Arthur Powell, B. S., Osage City, Kan. Farmer.
Lisle Willets Pursel, B. S., Joplin, Mo. Clerk and student of medicine.
Howard Newton Rhodes, B. S., Manhattan, Kan. Post-graduate student, Kansas State Agricultural College.
Ambrose Elliot Ridenour, B. S., Manhattan, Kan. Student of law.
Mary Etta Ridenour, B. S., Manhattan, Kan. Telephone operator.
Isaac Archie Robertson, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
Grace Anna Secrest, B. S., Randolph, Kan. Teacher.
Carl Snyder, B. S., Oskaloosa, Kan. Farmer.
Max Gilbert Spalding, B. S., Wichita, Kan. Farmer and teacher.
Orville Ashford Stingley, B. S., Manhattan, Kan. Mechanic.
Sadie Stingley, B. S., Manhattan, Kan. Teacher.
Gertrude Ella Stump, B. S., Manhattan, Kan. Post-graduate student, Kansas State Agricultural College.
Miriam Esther Swingle, B. S., Manhattan, Kan. Post-graduate student and student assistant, Kansas State Agricultural College.
William Elwood Thackrey, B. S., Manhattan, Kan. Teacher.
James Dunbar Trumbull, B. S., Manhattan, Kan. Clerk.
Frank Edwin Uhl, B. S., Gardner, Kan. Teacher.
Edwin H. Webster, B. S., Yates Center, Kan. Farmer.

SUMMARY.

The number of graduates up to 1897 is 519, of whom 179 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of bachelor of arts. Since 1877, all have received the degree of bachelor of science, after a four years' course in the sciences, with good English training.

Of the 340 men, 9 are deceased, and the remainder are reported in the following occupations;

Farmers	63
Fruit-growers, nurserymen, and gardeners	12
Professors and instructors in agricultural colleges	7
President of polytechnic institute	1
Assistants in agricultural experiment stations	5
In United States department of agriculture	3
Secretary of a state board of agriculture	1
Assistant in botanical garden	1
In United States government service	15
Teachers and students of special sciences	14
Superintendents of public schools	13
Teachers in public schools	51
Teachers in Indian schools	4
Students in other institutions	10
Mechanics	9
Journalists	20
Ministers and secretary of Y. M. C. A	12
Physicians and students of medicine, druggists, and dentists	20
Lawyers and students of law	30
Civil, electrical, mining and mechanical engineers	6
Architects and builders	5
Other professional men	3
Manufacturers	4
Merchants	13
Bankers	4
General business men	19
Telegraph operators and railroad agents	5
Officials and official clerks	6
Miners	4
Unknown	4
Total	364
In two occupations	33
	331

Of the 179 women, 6 are deceased, and the remainder occupied as follows:

Housewives	67
At home	17
Teachers in household economy	10
Teachers in public schools	36
Teachers and students of special sciences	20
Teachers of art and music	4
Bookkeepers, stenographers, and clerks	10
Milliners and dressmakers	3
Librarians	2
Nurses	2
Students in other institutions	4
Editors	3
Unknown	1
Total	179
In two occupations	6
	173

Laws Relating to the College.

The Board of Regents of the Kansas Agricultural College, deeming it advisable to publish in connection with this catalogue the laws relating to the College, both of the state of Kansas and of the United States, by resolution at their April 1897 meeting directed the undersigned to compile and edit such laws for publication. On consultation with Judge W. C. Webb of Topeka I found that he had completely and thoroughly done the work desired by the Board, and that the same would be published by him in the "General Statutes of Kansas, 1897," as chapter 57 of that work, which will be issued in a short time under authority conferred by the last legislature, and I have his permission to use said chapter. By such kindly permission I am able, on behalf of the Board of Regents, to present herewith to the public the various acts of congress and of the legislature of this state in relation to the Agricultural College. See next page.

T. J. HUDSON.

July 8th, 1897.

CHAPTER 57.*

STATE AGRICULTURAL COLLEGE.

DONATION MADE BY CONGRESS.

By chapter 130, approved 2d July 1862 (12 U. S. Stat. at Large, page 503,) congress donated or appropriated to each state and territory "which may provide colleges for the benefit of agricultural and mechanical arts," public lands (not mineral) not exceeding 30,000 acres for each senator and representative in congress. Section 4 of said act provides that all moneys derived from the sale of the lands so donated to each state, and the proceeds of the sales of land scrip issued to the states in lieu of lands so donated, shall be invested in stocks of the United States, or other safe stocks, which moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished, "and the interest of which shall be inviolably appropriated by each state to the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe."

Section 5 of said act provides that a sum not exceeding ten per centum upon the amount received by any state under its provisions may be expended for the purchase of lands for sites or experimental farms whenever authorized by the respective legislatures of said states, but no part of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings.

Under said act of congress Kansas received 90,000 acres of land which were set apart by ch. 3, laws of 1863, for the "endowment, support and maintenance" of an agricultural college.

AGRICULTURAL EXPERIMENT STATIONS.

[On the 2d of March 1887 congress passed an act "to establish agricultural experiment stations" in connection with agricultural colleges. The important features of this act and of supplementary acts will be found at the end of this chapter.]

GRANT ACCEPTED, AND COLLEGE LOCATED.

Chapter 3, Gen. Stat. 1868, (being chapters 2, 3 and 12, Laws 1863.)

§ 1. The provisions of the act of congress entitled "an act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and the mechanic arts," approved July 2d 1862, are hereby accepted by the state of Kansas; and the state hereby agrees and obligates itself to comply with all the provisions of said act. Upon the approval of this act by the governor, he is hereby instructed to transmit a certified copy of the same to the secretary of state and the secretary of the interior of the United States.

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* General Statutes of 1897.

[CHAPTER 3, LAWS OF 1863—Gen. Stat. 1868, p. 73—contains the following preamble: "Whereas, the congress of the United States, by an act approved July 2d 1862, and entitled 'an act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and the mechanical arts,' granted to the state of Kansas, upon certain conditions, ninety thousand acres of public lands for the endowment, support and maintenance of a college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life; and whereas, the state of Kansas by its legislature has expressed its acceptance of the benefits of the said act of congress, and has agreed to fulfill the conditions therein contained." Said act then proceeds:]

§ 2. The college in the foregoing preamble mentioned is hereby permanently located at and upon a certain tract of land, situated and being in the county of Riley and state aforesaid, and bounded and described as follows: Commencing at a point forty rods east of the northwest corner of the southwest quarter of section number twelve, in township number ten south, and range number seven east of the sixth principal meridian; thence running south, parallel to the east line of said quarter-section, eighty rods; thence west two hundred rods, more or less, to the west line of said quarter-section; thence north, on the west line of said quarter-section, eighty rods to the north line of said quarter-section; thence east two hundred rods, on the north line of said quarter-section, to the point of beginning, containing one hundred acres; provided however, that the location of said college as aforesaid is upon this express condition: that the Bluemont Central College Association, in whom the title to said land is now vested, shall, within six months from and after the approval of the governor hereto, cede to the state of Kansas in fee simple the real estate above described, together with all buildings and appurtenances thereunto belonging, and shall within such time transfer and deliver to said state the apparatus and library belonging to said Bluemont Central College Association.

[The "BLUE MONT CENTRAL COLLEGE ASSOCIATION" was incorporated by special territorial act approved 9th February, 1858—Private Laws of 1858, ch. 46, page 75—to be located "at or near MANHATTAN CITY, Kansas Territory."]

§ 3. The governor of the state is hereby authorized to receive the title papers by which the foregoing mentioned property may be transferred to the state, and to cause the same to be duly recorded in the proper office, and to be deposited in the office of the auditor of state.

[In his message to the legislature on 13th January 1864, Governor THOMAS CARNEY said: "The last legislature located the agricultural college at Manhattan, and authorized the governor of the state to receive the title papers. This duty has been done. The papers have been recorded in the proper office, and deposited with the auditor of state."]

NAME OF COLLEGE.

§ 4. The college for the benefit of agriculture and the mechanic arts, which was located by an act of the legislature entitled "an act to locate and establish a college for the benefit of agriculture and the mechanic arts," approved February 16th 1863, shall be known as the KANSAS STATE AGRICULTURAL COLLEGE.

GOVERNMENT OF COLLEGE — BOARD OF REGENTS.

Chapter 46, Laws 1897.

§ 5. The government of the state agricultural college is vested in a board of seven regents, all of whom shall be appointed by the governor and confirmed by the senate, and whose term of office shall be four years. Five of said regents shall be appointed on or before the first day of April 1897, one of whom shall hold his office until the first day of April 1899, and four of whom shall hold their office until the first day of April 1901; two others shall be appointed on or before the first day of April 1898, to hold office until the first day of April 1899; and on or before the first day of April 1899, and every four years thereafter, previous to the first day of April, three regents (and after the first day of April 1897, four regents) shall be appointed by the governor and confirmed by the senate for a term of four years each, their terms expiring on the first of April. But nothing in this act shall be construed so as to restrain the governor from appointing regents before the expiration of the regular legislative session.

§ 6. Whenever any vacancy shall occur in the said board of regents, it shall be the duty of the governor at once to appoint some suitable person to fill the vacancy. And when any appointment is made while the legislature is not in session, the appointee shall hold his office until action is taken upon his appointment by the senate; and if the senate fails to take action thereon, his term of office shall expire at the close of the session, and the governor shall fill the vacancy as in other cases.

§ 7. No one connected with the college as professor, tutor, teacher or employee, shall be a regent.

§ 8. The board of regents shall constitute a body corporate, with the right as such to sue and be sued, to use a common seal and alter the same at pleasure. A majority of the board of regents shall constitute a quorum to do business, and shall have power to enact ordinances, by-laws and regulations for the government of said college.

§ 9. The board of regents shall have the general supervision of the college, and the direction and control of all expenditures.

PRESIDENT — PROFESSORS, ETC.

§ 10. The regents shall elect a president who shall be the chief officer of the college, the head of each department thereof, and secretary of the board of regents, and whose duties and powers, otherwise than as prescribed in this act, shall be prescribed by the board of regents.

§ 11. The regents shall have power to fix, increase and diminish the regular number of professors and teachers, and to appoint the same and to determine the amount of their salaries. They shall have power to remove the president, and any professor or teacher, whenever the interest of the college shall require.

The regents of the state agricultural college have the power to make a valid contract for the employment of a professor or teacher for a specified period, and

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8—§§ 3, 15 and pt. of 4, Gen. Stat. 1868, p. 75.

9—§ 12, same.

10—§ 3 ch. 46, laws 1897.

11—§ 4 Gen. Stat. 1868, p. 75.

although such contract would not prevent the regents from discharging such professor or teacher prior to the expiration of the specified term, yet if they should do so without sufficient cause they would not relieve their board from paying such professor or teacher the full amount of the compensation agreed upon for such term; Board of Regents v. Mudge, 21 K. 223.

§ 12. The immediate government of the several departments shall be intrusted to the president and the respective professors and teachers, but the regents shall have power to regulate the course of instruction, and to prescribe, under the advice of the faculty, the books and authorities to be used in the several departments; also, to confer such degrees and grant such diplomas as are conferred by institutions of the highest grade.

OTHER OFFICERS — APPOINTMENT, ETC.

§ 13. The regents shall have power to appoint a secretary, librarian, treasurer, and such other officers as the interests of the college may require, who shall hold their office at the pleasure of the board, and shall receive such compensation as the board may prescribe.

§ 14. The treasurer of the said agricultural college shall before he receives from the board of regents the order for the funds in the hands of the state treasurer execute and give a bond, with five or more securities, to be approved by the board of regents, in double the amount of the funds of the said agricultural college (as near as the same can be ascertained) which will come into his hands as treasurer during his term of office, payable to the Kansas state agricultural college, and conditioned for the faithful discharge of his duties as treasurer of the said college. He shall keep an accurate account in a book kept for that purpose of all moneys, notes, bonds or other evidences of indebtedness coming into his hands as treasurer, and shall keep a separate account of the endowment and interest funds; he shall pay out no moneys except upon the order of the board of regents or the loan commissioner.

COLLEGE REGULATIONS — DEPARTMENTS.

§ 15. The college shall be open to all persons, under such regulations as may be prescribed by the regents; provided, that no student shall be refused admittance to this college simply because he has been expelled from some other college.

§ 16. The college shall consist of four departments: 1st, The department of agriculture. 2d, Mechanic arts. 3d, Military science and tactics. 4th, Literature and science.

SPECIMENS IN MINERALOGY — COLLEGE LIBRARY, ETC.

§ 17. It shall be the duty of the board of regents at their earliest convenience to secure a collection of specimens in mineralogy, geology, zoology, botany, and other specimens pertaining to natural history; and whenever a geological survey of the state may be made, a complete set of specimens collected shall be deposited in the cabinet of the college. The said board shall make provision for increasing

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12—§ 6 Gen. Stat. 1868, p. 75.
13—§ 11 Gen. Stat. 1868, p. 77.
14—§ 5 ch. 13, laws 1871.
15—§ 7 Gen. Stat. 1868, p. 76.
16—§ 5 Gen. Stat. 1868, p. 75.
17—§ 13 Gen. Stat. 1868, p. 77.

and preserving the library and apparatus belonging to the said college, and the apparatus and library that may be transferred to the state by the Bluemont Central College Association.

ANNUAL REPORT, OR EXHIBIT.

§ 18. The board of regents shall make an exhibit of the affairs of the college in each year to the superintendent of public instruction, setting forth the condition of the college, the amount of receipts and expenditures, the number of professors and teachers and other officers, and the compensation of each; the number of students in the several departments, and in the different classes, the books of instruction used, an estimate of the expenses of the ensuing year, a full transcript of the journal of the proceedings for the year, together with such other information and suggestions as they may deem important, or the superintendent of public instruction may require to embrace in his report, which shall be reported by the superintendent of public instruction to the legislature in his annual report.

REGENTS TO MAKE ADDITIONAL REPORT.

§ 19. The board of regents shall report annually the progress of said college, recording any improvements and experiments made, with their costs and results, and such other matters, including state and industrial and economical statistics, as may be supposed useful; one copy of which shall be transmitted by mail, free, to all the other colleges which may be endowed under the provisions of the act of congress entitled "an act donating public lands to the several states which may provide colleges for the benefit of agriculture and the mechanic arts," approved July 2 1862, and also one copy to the secretary of the interior.

BOARD OF VISITORS — DUTIES.

§ 20. A board of visitors, to consist of three persons, shall be appointed by the governor to hold their offices severally for one, two and three years, but their successors shall hold their office for three years. It shall be their duty to make a personal examination into the state and condition of the college in all its departments and branches once at least in each year, and report the result to the superintendent of public instruction, suggesting such improvements as they may deem important, which report shall be embodied in the report of the superintendent.

COLLEGE LANDS MAY BE SOLD.

§ 21. The board of regents of the state agricultural college are hereby authorized and directed to sell as soon as practicable, and in the manner hereinafter provided, the public lands granted by act of congress, approved July 2d 1862, to the state of Kansas, for the benefit of agriculture and the mechanic arts.

§ 22. The said board of regents shall sell any portion of lands mentioned in the preceding section, at a price not less than three dollars per acre, for cash at the time of sale, or upon the following conditions of credit, when deemed by them most conducive to the

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18—§ 8 Gen. Stat. 1868, p. 76.
19—§ 9 Gen. Stat. 1868, p. 76.
20—§ 10 Gen. Stat. 1868, p. 76.
21—§ 1 Gen. Stat. 1868, p. 78.
22—§ 2, same.

interests of said college, to-wit: In eight equal annual installments, with ten per centum interest on each installment, payable annually. The first installment to be paid at the date of purchase. The said board of regents are hereby authorized and directed to employ an agent or agents to sell said lands, and his rate of compensation, with other expenses of sale, shall not exceed three per centum upon the amount received from the sale of said lands; and he shall also have power to execute to the purchaser in the name of the state of Kansas all receipts for purchase money, and title bonds necessary to be given in the sale of said lands; provided, that on all timbered lands, half of the purchase money shall be paid in advance; and also, that a purchaser may at any time pay all arrearages and receive his patent; provided however, that all expenses of management and superintendence of said lands, and all the expenses attending the sale thereof and the investment of the proceeds which may be received therefrom, shall be paid by the state; and the auditor of state is hereby authorized to audit all expenses provided for in this act.

[See § 27 of this chapter.]

§ 23. The said agent or agents shall, before he or they enter upon the duties of the office, execute to the state of Kansas a bond in the sum of forty thousand dollars; said bond to be approved by the governor and filed in the office of the secretary of state.

§ 24. The agent for the sale of state agricultural college lands shall, on or before the fifth day of each month, pay over to the state treasurer all money received by him on account of sales of said lands or collections on prior sales for the month preceding. At the time of making such payment said land agent shall deliver to the auditor of state, and also to the secretary of the board of regents, a detailed statement, duly certified under his hand, showing the number of acres and descriptions of the lands sold, by whom purchased and the price per acre, and all collections on prior sales for the month upon which payments are made to the state treasurer.

[See § 27 of this chapter.]

§ 25. The president and secretary of the board of regents, or their agents, shall give receipts to the purchaser of said lands, for the payment of all installments and interest due thereon; and when the last installment upon any one purchase has been paid, the purchaser, his heirs or assigns, shall be entitled to a patent for the land so purchased, from the governor, under the great seal of the state, which patent shall confer upon the grantee a title in fee simple for the lands described in said patent.

§ 26. Any person failing to pay the purchase money for any of the lands purchased from the Kansas state agricultural college, or any installment of the same, shall forfeit all right to the land from the time of such failure of payment, and the board of regents shall proceed to eject such person from said land, if in possession.

Lands belonging to the agricultural college, which since the law of 1871 have been sold under a time contract, (part of the purchase money being paid,) are,

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23—§ 3 Gen. Stat. 1868, p. 79.
24—§ 4 ch. 141, laws 1883.
25—§ 4 Gen. Stat. 1868, p. 79.
26—§ 7 ch. 13, laws 1871.

before any right of forfeiture accrues, subject to taxation; Comm'rs of Dickinson Co. v. Baldwin, 29 K. 538.

So long as the land remained the absolute property of the agricultural college it was in effect the absolute property of the state and exempt from taxation; Board of Regents v. Hamilton, 28 K. 376; Comm'rs of Dickinson Co. v. Baldwin, 29 K. 540.

LANDS SOLD — AGENT — DUTIES OF SECRETARY.

§ 27. The board of regents of the Kansas state agricultural college is hereby authorized, in view of the fact that all the lands granted for endowment of said college have been sold, to empower the secretary of said board of regents to execute new contracts, subject to approval by said board of regents, for any lands returned upon forfeiture of contract, without the appointment of a land agent as provided in section two of chapter 105 of the laws of 1866 [§ 22 of this chapter,] and the officer so empowered shall be required to make the settlements and statements required of the land agent in section four of chapter 141 of the laws of 1883 [§ 24 of this chapter.] Such parts of said section two, and of said section four, as are inconsistent with this act are hereby repealed.

INTEREST ON PERMANENT FUND — HOW APPLIED.

§ 28. All money in the hands of the state treasurer during the fiscal years ending June 30th 1896, and June 30th 1897, received as interest on land contracts, bonds or other evidences of indebtedness, belonging to the permanent fund of the Kansas state agricultural college, is hereby appropriated for the support and maintenance of said college under direction of the board of regents of the Kansas state agricultural college as provided in the act of congress approved July 2d 1862.

BONDS TO BE ISSUED.

§ 29. The governor, treasurer and secretary of the state are hereby authorized and directed to issue, on or before the first day of April 1866, the bonds of the state of Kansas for the sum of five thousand five hundred dollars, the same to be negotiated by the governor, and the proceeds to be paid into the state treasury; said bonds, with coupons attached, shall run five years from their date, bearing interest at the rate of ten per centum per annum, payable semi-annually, at the office of the treasurer of state, and shall not be sold below their par value.

§ 30. The proceeds of the sale of said bonds shall be applied as follows, to-wit: The sum of five thousand five hundred dollars to pay arrearages incurred in conducting the Kansas state agricultural college, and to defray the current expenses of said college for the year 1866; and the auditor of state is hereby authorized to draw his warrant on the state treasurer in favor of the treasurer of the board of regents, upon an order of said board.

§ 31. The amount to be applied out of the income referred to in

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27—ch. 219, laws 1895.

28—ch. 241, laws 1895.

29—§ 6 Gen. Stat. 1868, p. 79.

30—§ 7 Gen. Stat. 1868, p. 79.

31—§ 8 Gen. Stat. 1868, p. 80.

section five of this act,* to meet the current expenses of said college, shall not exceed four thousand dollars per annum as long as the principal and interest on said bonds herein provided to be issued, remains unpaid; and all moneys realized from the accruing interest on said deferred payments and securities, over four thousand dollars per annum, shall be by the state treasurer applied in liquidation of said bonds, on the first day of January of each year, until the whole of said loan secured by the bonds herein provided shall have been paid; provided however, that if a sufficient fund is raised from the sale of said lands as will afford a surplus income after paying the bonds herein provided to be issued, and interest thereon as the same becomes due, a larger sum to defray the current expenses of said college may be appropriated, if the board of regents, in their judgment, may deem it necessary.

§ 32. The treasurer of the board of regents shall audit all accounts of said agent or agents for the sale of said lands, and all other accounts against said college, and the auditor of state shall audit all the accounts of said treasurer of said board of regents relating to said lands, and the sale thereof, and to the current expenses of said college.

AGRICULTURAL COLLEGE FUNDS — STATE TREASURY.

§ 33. The interest accruing on the investments of the state agricultural college funds and the interest paid upon sales of agricultural college lands shall be paid over to the treasurer of the state agricultural college by the state treasurer upon the warrant of the president of the board of regents, attested by the secretary.

§ 34. The treasurer of the state shall be responsible on his official bond for all sums of money, securities, bonds or other valuable things which may come into his hands by virtue of this act, and shall at the close of each month make to the secretary of the board of regents a detailed statement of collections and disbursements, and the conditions of such funds belonging to said college.

[The original of this section required that all moneys, bonds, etc., then belonging to the endowment fund should be turned over to the state treasurer on or before the first day of April 1883. That part of the section is omitted as obsolete.]

INVESTMENT OF COLLEGE FUNDS.

§ 35. The board of regents shall appoint a loan commissioner, whose duty it shall be to make investments of the funds belonging to the said agricultural college. The board of regents shall adopt rules and regulations under the provisions of this act, prescribing the kind and the manner in which all bonds and investments shall be made by said loan commissioner. He shall keep an accurate account in a book kept for that purpose of all loans and investments. He shall draw his warrant upon the treasurer of state for such sums as he may loan or invest, specifying in the warrant to whom the same is payable.

[* Sec. 5 was amended by § 2 of ch. 13 of laws of 1871, and said amendatory § 2 was repealed by § 140 of ch. 181 of laws of 1877; but "the income referred to in said § 5," was the proceeds of the sales of the lands granted by act of congress approved 2d July 1862.]

32—§ 10 Gen. Stat. 1868, p. 80.
33—§ 3 ch. 141, laws 1883.
34—§ 1, same.
35—§ 2 ch. 141, laws 1883.

The president of the college and secretary of the board of regents of the agricultural college shall approve all loans and investments made, and with the loan commissioner shall sign all warrants issued on the state treasurer. The loan commissioner shall draw no warrant except for loans and investments, and separate warrants shall be drawn for each loan or investment. All loans or investments shall be made in the name of the Kansas state agricultural college, and all principal and interest shall be payable at the office of the state treasurer.

§ 36. The board of regents may, if they deem it for the interest of said agricultural college, direct the treasurer to sell or dispose of any or all bonds or other evidences of indebtedness belonging to the said college, on such terms as they may prescribe, and the loan commissioner shall under their direction reinvest the proceeds as provided in section two of this act.

ACTS RELATING TO THE AGRICULTURAL COLLEGE WHICH HAVE SPENT THEIR FORCE.

CHAPTER 48, LAWS OF 1877.— By this act the regents of the state agricultural college were authorized to issue the bonds of said college to the amount of eleven thousand dollars — said bonds to be in denominations of one thousand dollars each, signed by the chairman of the board of regents, and attested by the secretary of the said board, with the seal of said agricultural college. The bonds issued under the provisions of this act were to be issued and dated on the thirtieth day of June 1877, and one bond to become due and payable on the thirtieth day of June of each year from 1878 to 1888 — each of said bonds to have interest coupons, in the sum of $100 each. The regents were required to set apart and appropriate annually out of the interest on the endowment fund of said college a sum sufficient to redeem the maturing bond, and to pay the interest on the same, and the accrued interest on the outstanding bonds. Said bonds were to be issued for the sole purpose of raising a fund for the purpose of paying off and redeeming certain warrants issued by the regents of said college in the year 1870 under the provisions of chapter 19 of the laws of that year; and it was made the duty of the board of regents of said college to invest the endowment fund of said college in the bonds issued under the provisions of said act at their par value — the funds raised from the sale of said bonds to be applied in the payment of said agricultural college scrip as fast as the same became due, and for no other purpose.

CHAPTER 177, LAWS OF 1877.—This act required the county clerks of the several counties in which lands known as the agricultural college lands were situated, which had been assessed and on which no taxes had been paid, and which said lands had been bid off by the county for delinquent taxes, to make a certificate of the amounts of said taxes, with costs and expenses of sales up to and including the year 1875, which said certificate must be forwarded to and duly filed and preserved in the office of the auditor of state, and when received by said auditor, and he satisfied of its correctness, he should give the county so forwarding said certificate credit on his books for the amount of such taxes and costs and expenses of sale. Said act also made it the duty of the board of commissioners of the several counties in which said lands had been so assessed to refund to persons who had paid taxes on said lands up to and including the year 1875, which sums so repaid by said counties were to be refunded to said counties by the state; and

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36—§ 6 ch. 13, laws 1871.

any tax deed or deeds which had been issued for lands so sold were to be canceled, and the taxes or moneys paid thereon were to be repaid by the counties, and said counties were to be reimbursed by the state. Said act appropriated $5,000 out of the endowment fund of said college to carry into effect its provisions.

CHAPTER 19, LAWS OF 1885.—By this act the board of regents of the state agricultural college was authorized to purchase additional land for experimental purposes out of the income fund of said college, not exceeding ten per cent. of the amount derived from the endowment fund of said institution for the years 1884 and 1885, and said regents were to make a report to the legislature of all lands purchased under authority of said act.

ACCEPTANCE OF ACT OF CONGRESS OF 30TH AUGUST 1890.

Senate Joint Resolution No. 2, Laws 1891, p. 414.

§ 37. The provisions of the act of congress approved 30th August 1890, entitled "an act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of congress approved July 2d 1862." are hereby accepted by the state of Kansas, and the state hereby agrees and obligates itself to comply with all of the provisions of said act; and the treasurer of state is designated as the proper officer to receive the funds therein appropriated, to be transmitted immediately to the treasurer of the Kansas state agricultural college.

§ 38. Upon the approval of this joint resolution by the governor, he is hereby instructed to transmit certified copies of the same to the secretary of the interior and the secretary of the treasury of the United States.

[Extracts from the act of congress of 30th August 1890, and other acts of congress relating to agricultural colleges and agricultural experiment stations, are appended to this chapter.]

SYNOPSIS OF SUNDRY ACTS OF CONGRESS.

Chapter 314 of the acts of congress, approved 2d March 1887, contains the following provisions:

SECTION 1. In order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of the college or colleges, or agricultural department of colleges in each state or territory, established or which hereafter may be established in accordance with the provisions of the act approved 2d July 1862, or any of the supplements of said act, a department to be known and designated as an "agricultural experiment station."

SEC. 2. It shall be the object and duty of said experiment station to conduct original researches or verify experiments on the physiology of plants and animals;

The diseases to which they are severally subject, with the remedies for the same;

The chemical composition of useful plants at their different stages of growth;

The comparative advantages of rotative cropping, as pursued under a varying series of crops;

The capacity of new plants or trees for acclimation;

The analysis of soils and water;

The chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds;

The adaptation and value of grasses and forage plants;

The composition and digestibility of the different kinds of food for domestic animals:

The scientific and economic questions involved in the production of butter and cheese;

And such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories.

SEC. 3. In order to secure as far as practicable uniformity of methods and results in the work of said stations, it shall be the duty of the United States commissioner of agriculture to furnish forms, as far as practicable, for the tabulation of results of investigation or experiments; to indicate from time to time such lines of inquiry as to him shall seem most important; and in general to furnish such advice and assistance as will best promote the purposes of this act.

It shall be the duty of each of said stations, annually, on or before the first day of February, to make to the governor of the state or territory in which it is located a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of said stations, to the said commissioner of agriculture, and to the secretary of the treasury of the United States.

SEC. 4. Bulletins or reports of progress shall be published at said stations at least once in three months, one copy of which shall be sent to each newspaper in the states or territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, as far as the means of the station will permit.

Such bulletins or reports, and the annual reports of said stations, shall be transmitted in the mails of the United States free of charge for postage, under such regulations as the postmaster-general may from time to time prescribe.

SEC. 5. For the purpose of paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results as hereinbefore prescribed, the sum of fifteen thousand dollars per annum is hereby appropriated to each state, to be paid in equal quarterly payments, on the first day of January, April, July, and October in each year* to the treasurer or other officer duly appointed by the governing boards of said colleges to receive the same; provided, that out of the first annual appropriation so received by any station an amount not exceeding one-fifth may be expended in the erection, enlargement or repair of a building or buildings necessary for carrying on the work of such station; and thereafter an amount not exceeding five per centum of such annual appropriation may be so expended.

SEC. 7. Nothing in this act shall be construed to impair or modify the legal relation existing between any of said colleges and the government of the states or territories in which they are respectively located.

SEC. 9. The grants of moneys authorized by this act are made subject to the legislative assent of the several states and territories to the purposes of said grants; (Supplt. to Rev. Stat., pp. 550 to 552.)

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* BY paragraph 1 of the act of congress (ch. 544) approved 3d March 1891, these payments are to be made quarterly in advance.

By chapter 373, a supplementary act, approved 7th June 1888, it was provided, that where the legislative assent of any state had not been given respecting the moneys authorized by the act to establish agricultural experiment stations, the governor when the legislature was not in session might make the assent therein provided for, and upon a certified copy of such assent filed with the secretary of the treasury he should cause such moneys or installments to be paid, until the termination of the next regular session of the legislature of such state; (Supplt. to Rev. Stat. 589.)

By a further act of congress approved 2d March 1889, it was provided, that as far as practicable all experimental stations should devote a portion of their work to the examination and classification of the soils of their respective states and territories, with the view to securing more extended knowledge and better development of their agricultural capabilities; (Supplt. to Rev. Stat., p. 679, ch. 373.)

By a supplemental act approved 30th August 1890, congress appropriated from the sales of public lands to each state and territory, for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts, the sum of $15,000 for the year ending 30th June 1890, and an annual increase of the amount of such appropriation thereafter for ten years of the additional sum of $1,000 over the preceding year — and the annual amount to be paid thereafter to each state and territory to be $25,000 — to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction; but no money is to be paid under said act to any state or territory for the support or maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students is to be held to be a compliance with the provisions of said act, if the funds received in such state or territory be equitably divided, such equitable division to be proposed by the legislature and reported to the secretary of the interior.

Section 2 of said act of 30th August 1890 provides, that the moneys thereby appropriated for the further endowment and support of colleges shall be paid annually, on or before the 31st of July in each year, such payment to be made to such officer as shall be designated by the laws of such state or territory — all such appropriations being made subject to the legislative assent of the several states and territories.

And § 3 of said act provides, that no portion of said moneys shall be applied under any pretense whatever to the purchase, erection or repair of any building or buildings; and it is made the duty of the president of each of such colleges to report annually to the secretary of agriculture, as well as to the secretary of the interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any experiment stations attached to said colleges, with their cost and results, etc. (Supplt. to Rev. Stat., ch. 841, pp. 797 to 799.)

Errata.

On page 4, under the heading "Board of Instruction," after Professor FAVILLE's name, insert the letters M. S. A. instead of "B. S."

On same page, after Professor PARSONS's name, insert the letters B. C. E.

The Board of Instruction for 1896–'97 appears on pages 4*a*, 5*a*, 6*a*, and 7*a*, inserted between between pages 8 and 9.

On page 36, after "Hygiene, 5," sixth line from top, insert "First Principles in Foods, Water Foods, 5."

On same page, after "Historic Ornament, 5," seventh line from bottom, insert: "Decoration and Furnishing, Public and Private, 5."

On page 38, fifth line from top, for "domestic economy," read *household economics.*

On page 47, third paragraph from top should read:

Zoology.—Fall term, third year.—Taking up Zoölogy after Anatomy, the student becomes acquainted with the basis of zoölogical classification. The comparison of selected types and the study of available forms by the aid of keys is also a part of the work of the term.

On page 74, class of 1891, Rachel Callie (Conwell) Thoburn's residence should be Denver, Colo., instead of Syracuse, Kan.

On page 76, class of 1893, Joseph B. Thoburn's residence should be Denver, Colo., instead of Syracuse, Kan., and his occupation is that of horticulturist.

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LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

GENERAL VIEW FROM EAST.

THIRTY-FIFTH ANNUAL CATALOGUE

OF THE

Officers, Students and Graduates

OF THE

KANSAS STATE
Agricultural College

MANHATTAN.

* * *

1897-'98.

* * *

J. S. PARKS, STATE PRINTER,
TOPEKA, KAN.
1898.

Terms and Vacations.

Fall Term, 1898, Fourteen Weeks.

WEDNESDAY, SEPTEMBER 7.—Examination for admission, at 9 A. M.
THURSDAY, SEPTEMBER 8.—College year begins.
SATURDAY, OCTOBER 22.—Examination.
SATURDAY, DECEMBER 3.—Annual exhibition of the Alpha Beta Society.
FRIDAY AND SATURDAY, DECEMBER 16, 17.—Examination at close of fall term.
DECEMBER 18 TO JANUARY 2.—Winter vacation.

Winter Term, 1899, Twelve Weeks.

MONDAY, JANUARY 2.—Examination for admission, at 9 A. M.
TUESDAY, JANUARY 3.—Winter term begins.
SATURDAY, JANUARY 28.—Annual exhibition of the Hamilton Society.
SATURDAY, FEBRUARY 11.—Examination.
SATURDAY, MARCH 11.—Annual exhibition of the Webster Society.
FRIDAY AND SATURDAY, MARCH 24, 25.—Examination at close of winter term.

Spring Term, 1899, Ten Weeks.

WEDNESDAY, MARCH 29.—Spring term begins.
SATURDAY, APRIL 22.—Annual exhibition of the Ionian Society.
SATURDAY, APRIL 29.—Examination.
TUESDAY AND WEDNESDAY, JUNE 6, 7.—Examination at close of year.
JUNE 4 TO 8.—Exercises of Commencement week.
THURSDAY, JUNE 8, AT 10:30 A. M.—Commencement.
JUNE 9 to SEPTEMBER 6.—Summer vacation.

Fall Term, 1899.

WEDNESDAY, SEPTEMBER 6.—Examination for admission, at 9 A. M.
THURSDAY, SEPTEMBER 7.—College year begins.

Board of Regents.

Hon. J. N. LIMBOCKER (1901)*, *President.*
Manhattan, Riley county.

Hon. Mrs. SUSAN J. ST. JOHN (1901), *Vice-President,*
Olathe, Johnson county.

Hon. C. B. HOFFMAN (1901), *Treasurer,*
Enterprise, Dickinson county.

Hon. T. J. HUDSON (1899), *Loan Commissioner,*
Fredonia, Wilson county.

Hon. GEORGE M. MUNGER (1901),
Eureka, Greenwood county.

Hon. WILLIAM H. PHIPPS (1899),
Abilene, Dickinson county.

Hon. E. B. COWGILL (1899),
Topeka, Shawnee county.

Pres. THOS. E. WILL (*ex officio*), *Secretary,*

I. D. GRAHAM, *Assistant Secretary,*
Manhattan.

---

* Term expires.

30720

Board of Instruction.

FACULTY.

THOMAS ELMER WILL, A. M. (*Harvard*), President,
Professor of Economics and Philosophy.

IRA D. GRAHAM, A. M. (*Eureka*), Secretary,
Professor of Bookkeeping, Commercial Law, and Accounts.

HENRY M. COTTRELL, M. S. (*Kansas State Agricultural College*),
Professor of Agriculture, Superintendent of Farm.

ALBERT S. HITCHCOCK, M. S. (*Iowa State Agricultural College*),
Professor of Botany.

JULIUS T. WILLARD, M. S. (*Kansas State Agricultural College*),
Professor of Applied Chemistry.

GEORGE F. WEIDA, Ph. D. (*Johns Hopkins*),
Professor of Pure Chemistry.

EDWARD W. BEMIS, Ph. D. (*Johns Hopkins*),
Professor of Economic Science.

OSCAR EUGENE OLIN, A. M. (*Kansas State Agricultural College*),
Professor of English Language and Literature.

FRANK PARSONS, B. C. E. (*Cornell University*),
Professor of History and Political Science.

E. E. FAVILLE, M. S. A. (*Iowa State Agricultural College*),
Professor of Horticulture and Entomology, Superintendent of Orchards and Gardens.

Mrs. HELEN CAMPBELL,
Professor of Household Economics, Superintendent of Domestic Science Departments.
(Until April 1, 1898.)

JOHN D. WALTERS, M. S. (*Kansas State Agricultural College*),
Professor of Industrial Art and Designing.

Miss MARY F. WINSTON, Ph. D. (*Goettingen*),
Professor of Mathematics.

OZNI P. HOOD, M. S. (*Rose Polytechnic*),
Professor of Mechanics and Engineering, Superintendent of Workshops.

RALPH HARRISON, First Lieutenant 2d U. S. Cavalry (*West Point*),
Professor of Military Science and Tactics.

ALEXANDER B. BROWN (*Boston Music School*), A. M. (*Olivet*),
Professor of Music.

FREDRIC AUGUSTUS METCALF, O. M. (*Emerson College of Oratory*),
Professor of Oratory.

ERNEST R. NICHOLS, D. B. (*Iowa State Normal*), B. S., A. M. (*State University of Iowa*),
Professor of Physics.

PAUL FISCHER, B. Agr., M. V. D. (*Ohio State University*),
Professor of Veterinary Science.

CHARLES S. DAVIS (*Kansas State Normal School*),
Superintendent of Printing.

Miss HARRIET HOWELL (*Pratt Institute*),
Superintendent of Sewing.

Miss ALICE RUPP,
Instructor in English.

Miss JOSEPHINE C. HARPER,
Instructor in Mathematics.

Miss HELEN J. WESCOTT,
Librarian.

Note.—Departments are arranged in alphabetical order.

ASSISTANTS AND FOREMEN.

WILLIAM L. HOUSE,
Foreman of Carpenter Shop.

BERTHA S. KIMBALL, M. S.,
Assistant in Drawing.

CON MORRISON BUCK, B. S.,
Assistant in Graphics.

WILLIAM BAXTER,
Foreman of Greenhouse.

CHARLOTTE J. SHORT, M. S.,
Assistant in Household Economics.

MRS. MARY L. HANSON,
Assistant in Department of Household Economics.

ENOS HARROLD,
Foreman of Iron Shop.

MARGARET J. MINIS,
Assistant Librarian.

THOMAS E. LAYDEN, B. S.,
Assistant in Mechanical Department.

CHARLES W. PAPE, B. S.,
Assistant Curator of Museum.

LORENA M. HELDER, M. T., B. S.,
Assistant in Music.

MRS. WINNIFREDE W. METCALF,
Assistant in Oratory.

HELEN H. HIGH,
Assistant in Sewing.

NOTE.—Departments are arranged in alphabetical order.

STUDENT ASSISTANTS.

(For 1897–'98.)

WILLIAM ANDERSON, History and Political Science.
R. H. BROWN, Music.
E. C. BUTTERFIELD, Horticulture.
R. W. CLOTHIER, B. S., Chemistry.
FLORENCE CORBETT, B. S., Botany.
PHILIP FOX, B. S., Free-hand Graphics.
E. C. GASSER, Ironwork.
HORTENSIA HARMAN, B. S. Oratory.
C. P. HARTLEY, United States History, Arithmetic, Horticulture.
ADA INGMAN, Library.
R. S. KELLOGG, B. S., Mathematics, Bookkeeping, History, Political Science.
A. T. KINSLEY, Chemistry.
SCHUYLER NICHOLS, Horticulture.
F. C. NICHOLSON, Ironwork.
MARY AUGUSTA NORTON, Free-hand Drawing.
J. M. PIERCE, Surveying.
R. H. POND, Botany, Chemistry, English.
H. F. ROBERTS, A. B., German.
M. W. SANDERSON, Surveying.
MAY SECREST, B. S., Library, United States History.
S. R. VINCENT, B. S., Algebra, Arithmetic, Mechanics.
J. M. WESTGATE, B. S., Algebra, Arithmetic, Botany, United States History.
A. D. WHIPPLE, Horticulture, Library.
H. N. WHITFORD, B. S., Algebra.

Other Officers.

WILLIAM CANFIELD LEE, A. B.,
Private Secretary to President.

LORENA E. CLEMONS, B. S.,
Clerk in Secretary's Office.

JACOB LUND, M. S.,
Engineer.

EUGENE EMRICK,
Janitor.

Experiment Station.

Council.

President WILL, Chairman, *ex officio.*
Professor COTTRELL, Agriculture.
Professor HITCHCOCK, Botany.
Professor WILLARD, Chemistry.
Professor FAVILLE, Horticulture.
Professor FISCHER, Veterinary Science.
Professor GRAHAM, Secretary.

Assistants.

F. C. BURTIS, M. S., Field and Feeding Experiments.
D. H. OTIS, B. S., Dairy.
GEORGE L. CLOTHIER, B. S., Botany.
PERCIVAL J. PARROTT, A. B., Entomology.
WM. L. HALL, Horticulture.

Note.—Departments are arranged in alphabetical order.

DOMESTIC SCIENCE HALL. MAIN BUILDING. LIBRARY HALL.

LIBRARY
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Students.

POSTGRADUATES.

NOTE.—Studies pursued during the year printed in italic.

CANDIDATES FOR MASTER'S DEGREE, 1898.

Con Morrison Buck, B. S. '96 .... *Architecture and Designing, Physics.*
Oskaloosa, Jefferson county.

George Lemon Clothier, B. S. '92. ..... *Botany, Chemistry, Horticulture.*
Vera, Wabaunsee county.

Florence Ruth Corbett, B. S. '95....... *Household Economics, Botany, Designing.*
Manhattan, Riley county.

William Henry Moore, B. S. '94........ *Horticulture, Botany, Entomology.*
Manhattan, Riley county.

Charles Wesley Pape, B. S. '95......... *Zoology, Architecture and Designing, Geology.*
Manhattan, Riley county.

Herbert F. Roberts, A. B. '91 (K. S. U.), LL. B. '93 (N. W. U.), *Botany, Horticulture, Chemistry, Drawing.*
Manhattan, Riley county.

Samuel Robert Vincent, B. S. '94....... *Physics, Engineering.*
Orie, *Oklahoma.*

NON-RESIDENT.

George E. Rose........................ *Horticulture, Entomology.*
Kansas City, Wyandotte county.

Mrs. Ava Hamill Tillotson, B. S. '92.... *Household Economics, Zoology.*
Hill City, Graham county.

Charles Henry Thompson, B. S. '93..... *Botany, Horticulture.*
Columbia, *Missouri.*

Joseph B. Thoburn, B. S. '93........... *Horticulture, Botany.*
Denver, *Colorado.*

IN COURSE LEADING TO MASTER'S DEGREE.

Judson H. Criswell, B. S. '89........... *Agriculture, Botany.*
Manhattan, Riley county.

Robert Waitman Clothier, B. S. '97..... *Chemistry, Agriculture, Physics, Mathematics, German.*
Vera, Wabaunsee county.

Philip Fox, B. S. '97.................... *Architecture and Designing, Physics, Mathematics, Oratory, Chemistry.*
Manhattan, Riley county.

Charles Pinckney Hartley, B. S. '92 .... *Horticulture, Botany, Entomology.*
Manhattan, Riley county.

Jesse Baker Norton, B. S. '97 .... *Entomology, Designing, Botany, German.*
Manhattan, Riley county.

May Secrest, B. S. '92.................. *Household Economics, Chemistry, German.*
Randolph, Riley county.

John Minton Westgate, B. S. '97 .... *Botany, Chemistry, Drawing.*
Westgate, Geary county.

Harry N. Whitford, B. S. '90........... *Botany, Horticulture.*
Manhattan, Riley county.

NON-RESIDENT.

Roger William Bishoff, B. S. '97........ *Economics, Horticulture.*
Eudora, Douglas county.

Albert Dickens, B. S. '93............... *Economics, Horticulture.*
Bushton, Rice county.

Clay Berkey Ingman, B.S. '97.......... *Agriculture, Horticulture, Entomology.*
Barnes, Washington county.

John James Johnson, B.S. '95 .... *Chemistry, Horticulture.*
St. Louis, *Missouri.*

Frederick Hugo Meyer, B.S. '97........ *Horticulture, Entomology.*
Menager, (Leavenworth county.)

John Bitting Smith Norton, B.S. '96.... *Botany, Horticulture.*
St. Louis, *Missouri.*

James Francis Odle, B.S. '94........... *Agriculture, Chemistry, Physics.*
Monaca, *Pennsylvania.*

Charles Edwin Pincomb, B.S. '96....... *Veterinary Science, Agriculture.*
Hector, Johnson county.

Victor Irvin Sandt, B.S. '94............ *Architecture and Designing, Mathematics, Geology.*
Home, Marshall county.

IN ADVANCED WORK NOT LEADING TO A DEGREE.

Mary C. Bower, B.S. '83................ *German.*
Manhattan, Riley county.

Clara Francelia Castle, B.S.'94, M.S.'97.. *Household Economics.*
Manhattan, Riley county.

Lorena Estella Clemons, B. S. '94 ...... *Mathematics.*
Manhattan, Riley county.

Charles Francis Doane, B. S. '96........ *Agriculture.*
Milwaukee, *Wisconsin.*

Samuel Dolby, B.S. '97...... .... *General History, Oratory.*
Longford, Clay county.

Martha Fox, B.S. '97.................... *Drawing, Mathematics.*
Manhattan, Riley county.

Phœbe Ellen Haines, B.S. '83, M.S. '87.. *Physical Culture, Oratory, Sewing.*
Manhattan, Riley county.

George Clifton Hall, B.S. '96........... *Law.*
Manhattan, Riley county.

Hortensia (Harman) Patten, B.S. '95... *Household Economics, Literature, Oratory.*
Sycamore, *Illinois.*

Mary Frances Burgoyne Harman, B.S. '93, *Drawing.*
Olathe, Johnson county.

Ivy Frances Harner, B.S. '93, M.S. '97.. *Household Economics, Bacteriology, Literature.*
Ruston, *Louisiana.*

Amy Myrtle Harrington, B.S. '91....... *Oratory.*
Manhattan, Riley county.

Mary Eliza Haulenbeck, B.S. '97....... *Oratory, Dramatic Art.*
Manhattan, Riley county.

Helen H. High, '95 (Armour Institute).. *Drawing, Music.*
Manhattan, Riley county.

Myrtle Hattie Hood, B.S. '97........... *Oratory.*
Manhattan, Riley county.

Winifred Anna Houghton, B.S. '97..... *Oratory.*
Manhattan, Riley county.

Rev. William P. James, A.B. '90 (Highland University), *Oratory.*
Manhattan, Riley county.

Royal S. Kellogg, B.S. '96 *Mathematics, Economics, Oratory, German.*
Fay, Russell county.

Edith Lynette Lantz, B.S. '96 *Chemistry of Foods.*
Manhattan, Riley county.

Sue Long, B.S. '96 *General History, English Literature.*
Manhattan, Riley county.

Oliver Ezra Noble, B.S. '97 *Economics, Drafting.*
Manhattan, Riley county.

Ellen Elizabeth Norton, B.S. '96 *Household Economics, Botany, Literature.*
Manhattan, Riley county.

Mary Augusta Norton, B.S. '97 *German, Drawing.*
Manhattan, Riley county.

Lisle Willets Pursel, B.S. '96 *Chemistry.*
Manhattan, Riley county.

Howard Newton Rhodes, B.S. '96 *Mathematics.*
Manhattan, Riley county.

Alice Myrtle Shofe, B.S. '97 *English Literature, Botany, Music.*
Manhattan, Riley county.

Charlotte Jane Short, B.S. '91, M.S. '93, *Drawing, Music.*
Manhattan, Riley county.

Ora Gertrude Yenawine, B.S. '95 *Household Economics, Chemistry.*
Manhattan, Riley county.

NON-RESIDENT.

Laura Sarah (McKeen) Smith, B.S. '95 *Drawing.*
Russell, Russell county.

FOURTH YEAR.

Name.	*Post-office and County (or State).*
Emory Sherwood Adams,	Manhattan, Riley.
Joshua William Adams,	Marvin, Phillips.
Samuel John Adams,	Marvin, Phillips.
Thomas Walter Allison,	Florence, Marion.
William Anderson,	Cleburne, (Pottawatomie.)
Jessie Geneva Bayless,	Yates Center, Woodson.
John Harold Blachly,	Manhattan, Riley.
Hope Brady,	Manhattan, Riley.
Robert Henry Brown,	Manhattan, Riley.
Earl Carver Butterfield,	Hull, Marshall.
John Alfred Conover,	Sabetha, Nemaha.
Minnie Laura Copeland,	Quenemo, Osage.
Willet Ranson Correll,	Manhattan, Riley.
Lucy Maria Cottrell,	Wabaunsee, Wabaunsee.
George Retilley Crawford,	Manhattan, Riley.
Anna Magdalena Dahl,	Webber, Jewell.
Inga Josephine Dahl,	Webber, Jewell.
Cassie Belle Dille,	Edgerton, Johnson.
Emma Phillipine Doll,	Larned, Pawnee.
Cora Elizabeth Ewalt,	Manhattan, Riley.
Guy Francis Farley,	Melvern, Osage.
Josephine Finley,	Randolph, Riley.

Name.	*Post-office and County (or State).*
Mary Finley,	Randolph, Riley.
Arthur Lorenzo Frowe,	Louisville, Pottawatomie.
William Logan Hall,	Anthony, Harper.
Anna Viola Hanson,	Manhattan, Riley.
Walter Eugene Hardy,	Manhattan, Riley.
James Madison Harvey,	Junction City, (Riley.)
Emmett Vivian Hoffman,	Enterprise, Dickinson.
Guy Dudley Hulett,	Edgerton, Johnson.
Ada Ingman,	Barnes, Washington.
Bertha Ingman,	Barnes, Washington.
Ary Cordelia Johnson,	Success, Russell.
John Martin Kessler,	Topeka, Shawnee.
Charles Percy King,	Ogamaw, *Arkansas.*
Bessie May Locke,	Manhattan, Riley.
Olive Long,	Manhattan, Riley.
William Andrew McCullough,	Delavan, Morris.
Inez Isadore Manchester,	Chiles, Miami.
Florence Adelia Martin,	Junction City, (Riley.)
Henry Alba Martin,	Junction City, (Riley.)
Alice Maude Melton,	Manhattan, Riley.
George Gerkein Menke,	Garden City, Finney.
Mary Frances Minis,	Manhattan, Riley.
May Moore,	Manhattan, Riley.
Louis Anthony Nelson,	Marysville, Marshall.
Hattie Grace Nichols,	Liberal, Seward.
Schuyler Nichols,	Liberal, Seward.
Albert Alden Paige,	Manhattan, Riley.
Lucy Junie Parks,	Manhattan, Riley.
Ernest Byron Patten,	Silver Lake, Shawnee.
Clara Jeanette Perry,	Manhattan, Riley.
Emilie Matilda Pfuetze,	Manhattan, Riley.
John Martin Pierce,	Genoa, *Illinois.*
Mabel Clair Pond,	Topeka, Shawnee.
Raymond Haines Pond,	Topeka, Shawnee.
William Poole,	Briggs, Geary.
Willis Thomas Pope,	Lincolnville, Marion.
Nora May Reed,	Genoa, *Illinois.*
Gertrude Rhodes,	Manhattan, Riley.
Henry William Rogler,	Matfield Green, Chase.
Ferdinand John Rumold,	Dillon, Dickinson.
Martin Wilbur Sanderson,	Reedville, Marshall.
Otto David Secrest,	Randolph, Riley.
Olive Maria Shelden,	Manhattan, Riley.
Edwin Lee Smith,	Manhattan, Riley.
Oliver Russell Smith,	Manhattan, Riley.
Bertha Spohr,	Manhattan, Riley.
Andrew B. Symns,	Brenner, Doniphan.
Cora Thackrey,	Manhattan, Riley.
Harriet Emerson Thackrey,	Manhattan, Riley.
Henry Marsden Thomas,	Melvern, Osage.
Elsie Lucile Waters,	Manhattan, Riley.

Name.	*Post-office and County (or State).*
Fred Dorsey Waters,	Manhattan, Riley.
Abner Davis Whipple,	Olivet, Osage.
Charles Bernard White,	Waverly, Coffey.
Adelaide Frances Wilder,	Manhattan, Riley.
Josephine Hannah Wilder,	Manhattan, Riley.
Nannie Elizabeth Williams,	Edgerton, Johnson.
Frank Yeoman,	La Crosse, Rush.
Frederick Zimmerman,	Moray, Doniphan.
Kate Elizabeth Zimmerman,	Moray, Doniphan.

THIRD YEAR.

Bonnie Frances Adams,	Marvin, Phillips.
Morrison Carpenter Adams,	Marvin, Phillips.
Delmer Akin,	Manhattan, Riley.
Melvia Fairetta Avery,	Manhattan, Riley.
Etta Barnard,	Manhattan, Riley.
Aaron Schuyler Berry,	Manhattan, Riley.
Minerva Blachly,	Manhattan, Riley.
Albert Edwin Blair,	Quenemo, Osage.
Fred Winchester Bobbitt,	Manhattan, Riley.
Lillie Grace Bolton,	Paxico, Wabaunsee.
James Courtney Bolton,	Paxico, Wabaunsee.
Joseph Abbott Butterfield,	Topeka, Shawnee.
Ernest Lerned Cottrell,	Wabaunsee, Wabaunsee.
Ethel Day,	Lincoln, Lincoln.
Alfred Burton Dille,	Edgerton, Johnson.
Lottie Ethel Eakin,*	Manhattan, Riley.
Edwin Oscar Farrar,	Axtell, Marshall.
Peter Fred Fleming,	Paola, Miami.
Harry Verne Forest,	Thayer, Neosho.
Francis Joseph Habiger,	Bushton, Rice.
Elizabeth Hall,	Manhattan, Riley.
Frank Robbins Hall,	Manhattan, Riley.
John George Haney,	Courtland, Republic.
Myrtle Mary Harner,	Manhattan, Riley.
John Andrew Harvey,	Junction City, (Riley.)
Grace Edna Hill,	Phillipsburg, Phillips.
Hiram Adsit Holzer,	Girard, Crawford.
Stella May Hougham,	Manhattan, Riley.
John Frederic Howe,	Syracuse, Hamilton.
Charles Clifford Jackson,	Gypsum, Saline.
Fred Emanuel Johnson,	Melvern, Osage.
Harry Wallace Johnston,	Caldwell, Sumner.
Lot Parker Keeler,	Centropolis, Franklin.
Albert Thomas Kinsley,	Oakley, Logan.
Ernest Charles Ladd,	Kewanee, *Illinois*.
Frank Elmer LaShelle,	Chepstow, Washington.
Christian Dagobert Lechner,	Morganville, Clay.
Clara Long,	Manhattan, Riley.
Louisa Mary Maelzer,	Neuchatel, Nemaha.

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* Deceased.

Name.	*Post-office and County (or State).*
Katie Anna Manley,	Council Grove, Morris.
Clark Mansfield,	Junction City, Geary.
Claud Masters,	Hillsdale, Miami.
Robert Bertice Mitchell,	Florence, Marion.
Jennie June Needham,	Lane, Franklin.
Roscoe Townley Nichols,	Liberal, Seward.
Hans Peter Nielsen,	Denmark, Lincoln.
Fanny Gertrude Noyes,	Wabaunsee, Wabaunsee.
Harry Delphos Orr,	Riley, Riley.
Kate Paddock,	Manhattan, Riley.
Carrie Vashti Painter,	Meade, Meade.
Anna C. Pfuetze,	Manhattan, Riley.
Ernest Poston,	Netawaka, Jackson.
Andrew Pottorf,	Riley, Riley.
Laura Ida Pritchard,	La Cygne, Linn.
Mary Bly Pritner,	Keats, Riley.
Otto Independence Purdy,	Fairview, Brown.
Delmer William Randall,	Manhattan, Riley.
William Harry Roberts,	Walsburg, Riley.
Frank Sessions Shelton,	Brisbane, *Queensland.*
Gertrude Werden Shofe,	Manhattan, Riley.
Harley Lee Snodgrass,	Manhattan, Riley.
Milton David Snodgrass,	Manhattan, Riley.
Stella Stewart,	Olathe, Johnson.
Annie Louisa Streeter,	Milford, Geary.
Fayette Charles Sweet,	Burlington, Coffey.
Frances Elleanor Thackrey,	Manhattan, Riley.
Leon Henry Thomas,	Oakley, Logan.
Emma Elizabeth Tilton,	Detroit, Dickinson.
Nellie Towers,	Manhattan, Riley.
Otho Sprague True,	Vera, Wabaunsee.
James Otis Tulloss,	Rantoul, Franklin.
William Guy Tulloss,	Rantoul, Franklin.
George Franklin Wagner,	Enterprise, Dickinson.
Mary Lana Waugh,	Manhattan, Riley.
Alexander George Wilson,	Mapleton, Bourbon.
Frederick Otto Woestemeyer,	Bethel, Wyandotte.
Hervey W. Yenawine,	Manhattan, Riley.

SECOND YEAR.

Lizzie Jane Agnew,	Yates Center, Woodson.
Grace Allingham,	Manhattan, Riley.
Howard Allman,	Manhattan, Riley.
Edgar McCall Amos,	Manhattan, Riley.
Cecil Girard Anderson,	Manhattan, Riley.
Alice Amanda Arnold,	Manhattan, Riley.
Minnie Atwell,	Manhattan, Riley.
Effie Elizabeth Bailey,	Manhattan, Riley.
Alvah I. Bain,	Marysville, Marshall.
Harry Bainer,	Ottawa, Franklin.
Claude Raymond Bardrick,	Miltonvale, Cloud.

Name.	*Post-office and County (or State).*
Ella May Barnard,	Manhattan, Riley.
Charlotte Almira Berkey,	Cleveland, *Missouri.*
Zina Leigh Bliss,	McPherson, McPherson.
Bettie Briggs,	Briggs, Geary.
Louie Brigham,	Randall, Jewell.
Cora L. Brooks,	Allen, Lyon.
Georgia Brooks,	Manhattan, Riley.
Ben Remenyi Brown,	Manhattan, Riley.
Beulah J. Brown,	Leavenworth, Leavenworth.
Arthur Kinney Browning,	Hamlin, Brown.
Elizabeth Barrett Browning,	Manhattan, Riley.
Tom Melancthon Cannon,	White Eagle, *Oklahoma.*
Louis Marion Chase,	White, Jackson.
Frederick Waldemar Christensen,	Mariadahl, (Riley.)
Charles Howard Clark,	Kinsley, Edwards.
Ernest Marsden Clark,	Garlington, Franklin.
Ernest Mansel Cook,	Oakley, Logan.
Faith Adella Cooper,	Keats, Riley.
Joseph Bryson Corbett,	Manhattan, Riley.
Charles Maclain Correll,	Manhattan, Riley.
John Francis Crowl,	Chino, *California.*
Mary Elizabeth Crum,	Stockdale, Riley.
Amanda Culp,	Leavenworth, Leavenworth.
Pearle Hoff Cunningham,	Manhattan, Riley.
Jennie Maude Currie,	Manhattan, Riley.
Fannie Rachel Ellen Dale,	Manhattan, Riley.
Sarah Emily Davies,	Bala, Riley.
Laura Orminta De Armond,	Manhattan, Riley.
Samuel Christy Deeds,	Lincoln, Lincoln.
Harry Leroy Dern,	Kingman, Kingman.
Homer Derr,	Baldwin, Douglas.
Mary Alberta Dille,	Edgerton, Johnson.
Charles Madison Drown,	Manhattan, Riley.
Elmer Alexander Drown,	Granada, Nemaha.
James Clark Duff,	Baxter Springs, Cherokee.
Elsie Porter Dunaway,	Manhattan, Riley.
Benjamin Franklin Durant,	Riley, Riley.
Charles Eastman,	Ogden, Riley.
Robert Edward Eastman,	Bloomington, Osborne.
Jennie Edelblute,	Keats, Riley.
Edwin Amos Eggleston,	Columbus, Cherokee.
Julia Anna Ehrsam,	Enterprise, Dickinson.
Emma Mary Eikenhorst,	Manhattan, Riley.
Otto H. Elling,	North Cedar, Jefferson.
Mark Faris,*	Denison, Jackson.
Emma Alice Follin,	Baldwin, Douglas.
Lula Mae Folsom,	Little River, Rice.
Lucius Grant Folsom,	Little River, Rice.
Lottie Blanche Forsythe,	Dwight, Morris.
Frank W. Foster,	Clifton, Clay.

---

* Deceased.

Name.	*Post-office and County* (*or State*).
Ernst Christian Gasser,	Neosho, *Missouri.*
Harry Senis Goddard,	Vera, Wabaunsee.
George Ogden Greene,	Lincoln, Lincoln.
Hermann Haffner,	Junction City, Geary.
Hakon Hansen,	Guy, Sheridan.
Gustaf William Hanson,	Marquette, McPherson.
James William Harner,	Manhattan, Riley.
Lillian Estelle Hathaway,	Grant, Riley.
Orlo Bertie Haven,	Belleville, Republic.
Charles Russell Haymond,	Burdett, Pawnee.
William Alfred Hayward,	Manhattan, Riley.
Mamie Eva Helder,	Manhattan, Riley.
Louis Gardner Hill,	Phillipsburg, Phillips.
Karl William Hofer,	Manhattan, Riley.
Daisy Gladys Hoffman,	Enterprise, Dickinson.
Edward Wilfred House,	Manhattan, Riley.
Ada Belle How,	Manhattan, Riley.
Floyd James Howard,	Manhattan, Riley.
Minnie Howell,	Manhattan, Riley.
Edith Huntress,	Manhattan, Riley.
Alexander Hutchison,	Arispie, Pottawatomie.
Merton Raymond Johnson,	Olsburg, Pottawatomie.
Louis Berton Jolley,	Manhattan, Riley.
Melville Eugene Joslin,	Randall, Jewell.
Ina Bertha Kneeland,	Milford, Geary.
Raymond George Lawry,	Hollis, Cloud.
Walter Fisk Lawry,	Hollis, Cloud.
Arthur Moore Lee,	Manhattan, Riley.
Charles Henry Lehmkuhl,	Muscotah, Atchison.
Charles Curtis Livingston,	Abilene, Dickinson.
Erma Elizabeth Lock,	Riley, Riley.
Bertha McCreary,	Manhattan, Riley.
N. Ollie McCurry,	Milo, Lincoln.
Mary Agnes McKean,	Grant, Riley.
Roland McKee,	Marysville, Marshall.
Madge Ruth McKeen,	Manhattan, Riley.
Lee McLaren,	Altoona, Wilson.
Nettie McLaren,	Altoona, Wilson.
Amy Manchester,	Chiles, Miami.
William Elmer Miller,	Potter, *Oklahoma.*
John Rutherford Minis,	Manhattan, Riley.
Charles Dudley Montgomery,	Cedar Point, Chase.
Jennie Edna Moore,	Westmoreland, Pottawatomie.
Clarence William Morgan,	Hillside, Phillips.
Eugene Lawrence Morgan,	Hillside, Phillips.
Fred Byers Morlan,	White Rock, Republic.
Arthur Guy Moyer,	Princeton, Franklin.
Dorothy Myers,	Manhattan, Riley.
George Edward Nelson,	Kackley, Republic.
George Edgar Newton,	Fact, Clay.
Fred Cranston Nicholson,	Manhattan, Riley.

Name.	*Post-office and County (or State).*
Anna Olson,	Mullinville, Kiowa.
Andrew Edward Oman,	Walsburg, Riley.
George Washington Owens,	Alma, Wabaunsee.
Joseph Lloyd Pancake,	Scott City, Scott.
Albert William Parrack,	Riley, Riley.
James Ralph Payne,	Waterville, Marshall.
Ella Emerson Peck,	Big Valley, *Texas.*
Rutherford Brockway Peck,	Oakland, Shawnee.
Jesse LeRoy Pelham,	San Luis Potosi, *Mexico.*
Edith Perkins,	Manhattan, Riley.
Elenore Perkins,	Manhattan, Riley.
John Valentine Pettys,	Herndon, Rawlins.
Paul du Chaillu Piersol,	Randall, Jewell.
Leonard Poston,	Netawaka, Jackson.
Luther Eugene Potter,	Rose, Woodson.
Abbie Elida Putnam,	Manhattan, Riley.
Rosa Minnie Ray,	Winfield, Cowley.
Claude Leroy Ream,	Wetmore, Nemaha.
Alwina Theresea Remmele,	Manhattan, Riley.
George Dwight Reynolds,	Hollenberg, Washington.
Harry Paul Richards,	Manhattan, Riley.
Andrew Edward Robe,	Waverly, Coffey.
Elsie May Robinson,	Manhattan, Riley.
Earle Kyle Rogers,	Marion, Marion.
Alice May Ross,	Manhattan, Riley.
Fred Arthur Russell,	Paola, Miami.
Alvira Salkeld,	Manhattan, Riley.
Alvirtis Cantford Salkeld,	Manhattan, Riley.
Mary Sandell,	Manhattan, Riley.
Claude Herbert Sanford,	Fayetteville, *Arkansas.*
William Stephen Sargent,	Riley, Riley.
Jessie Schick,	Scott City, Scott.
Adelaide Short,	Fruita, *Colorado.*
Anna Augusta Siegrist,	Manhattan, Riley.
Ed. S. Sittel,	McAlester, *Indian Territory.*
Anna Louisa Smith,	Ottumwa, Coffey.
Charles Chester Sowell,	Vassar, Osage.
Clara Spilman,	Manhattan, Riley.
Amelia Spohr,	Manhattan, Riley.
Leroy Stafford,	Republic, Republic.
Mabel Stewart,	Olathe, Johnson.
Blanche Elsie Stump,	Manhattan, Riley.
Cora Edith Swingle,	Manhattan, Riley.
Dean Brett Swingle,	Manhattan, Riley.
Carl Thurber,	Twin Mound, Douglas.
Laura Helen Trumbull,	Manhattan, Riley.
Harry Castle Turner,	Rock Creek, Jefferson.
Phillip Farrand Van Everen,	Manhattan, Riley.
Joseph Culver Van Orsdel,	Waterville, Marshall.
Grace Voiles,	Manhattan, Riley.
Jessie May Wagner,	Enterprise, Dickinson.

Name.	*Post-office and County (or State).*
Luther Watts Waldraven,	Winkler, Riley.
Bolivar Kernest Walters,	Manhattan, Riley.
Harvey Augustus Washburn,	Riley, Riley.
Lester Monroe Werts,	Denison, (Jefferson.)
Cyrus Edward Wilkins,	Vilas, Wilson.
George Edwin Williams,	Hoganville, Graham.
Nellie Mitchell Williams,	Springside, Pottawatomie.
Charles Clarence Winsler,	Abilene, Dickinson.
Nellie M. Winter,	Manhattan, Riley.
Royal Samuel Wood,	Strong City, Chase.
Lilly Maud Zimmerman,	Moray, Doniphan.

FIRST YEAR.

Arthur Lewis Adams,	Stockton, Rooks.
Rosa May Agnew,	Yates Center, Woodson.
Frederick Car Alexander,	Holton, Jackson.
Marian Allen,	Manhattan, Riley.
Cyrus Norton Allison,	Florence, Marion.
Robert George Andrews,	Marysville, Marshall.
Henry Albert Avery,	Manhattan, Riley.
Wallace W. Baird,	Milford, (Riley.)
Roy Gordon Baldwin,	Seneca, Nemaha.
Edna De Haven Barnes,	Oakland, Shawnee.
Walter Barnum,	Lincoln, Lincoln.
Hattie Beachum,	Manhattan, Riley.
George Ford Bean,	Alma, Wabaunsee.
Charles William Beard,	Riley, Riley.
Edwin Gaines Beckes,	Grand Haven, (Osage.)
Lydia Margaret Bell,	Manhattan, Riley.
Rosa Simpson Bell,	Garlington, Franklin.
Wilbur Morton Bennett,	Parkerville, Morris.
Evalyne A. Bentley,	Catalpa, Gove.
Roy Robert Berkley,	Manhattan, Riley.
Inez Berry,	Mound City, Linn.
Elizabeth Blachly,	Manhattan, Riley.
Loua Adelle Blachly,	Manhattan, Riley.
Georgia Evaline Blaney,	Manhattan, Riley.
Winfred B. Bletcher,	Reedsville, Marshall.
Bessie Sarah Bourne,	Delphos, Ottawa.
Harry S. Bourne,	Delphos, Ottawa.
Roy Allison Bower,	Eureka, Greenwood.
Warren Luther Bowlby,	Fairport, Russell.
George Wallace Brewer,	Waverly, Coffey.
Martha Amelia Briggs,	Briggs, Geary.
Leon Broquet,	Manhattan, Riley.
Prudence Dell Broquet,	Manhattan, Riley.
Alexander Dashway Brown,	Manhattan, Riley.
Ida Blanche Brown,	Manhattan, Riley.
William Albert Brown,	Ottawa, Franklin.
Charles Jay Burson,	Niotaze, Chautauqua.
Howard Frank Butterfield,	Hull, Marshall.

Name.	*Post-office and County (or State).*
Emma M. Cain,	Clay Center, Clay.
Martha Henrietta Campbell,	Abilene, Dickinson.
Owen Theodore Carnes,	Salina, Saline.
John Tunice Carrier,	Cunningham, Kingman.
Isaac Newton Chilcott,	Mankato, Jewell.
Murray Stanley Cole,	Denison, Jackson.
Robert Curtise Cole,	Denison, Jackson.
Edwin Charles Cook,	Oakley, Logan.
Mabel Aletta Corbett,	Manhattan, Riley.
Charles K. Corkill,	Manhattan, Riley.
Leonard Crandall,	Reserve, Brown.
Lotta Irene Crawford,	Manhattan, Riley.
Thomas Edward Creighton,	Americus, Lyon.
James Henry Crocker,	White City, Morris.
Harry Crump,	Manhattan, Riley.
Trena Dahl,	Webber, Jewell.
Elliott Perie Daniels,	Birmingham, Jackson.
Norma Daniels,	Parsons, Labette.
Sadie Elaine Daniels,	Manhattan, Riley.
Joe Robert Davidson,	Agricola, Coffey.
Laura Davidson,	Agricola, Coffey.
Mary Ann Davies,	Bala, Riley.
Robert William De Armond,	Lincoln, Lincoln.
Daniel Curtis Deming,	Larkin, Jackson.
Orlando Ross Deputy,	Riley, Riley.
Herman August Dieball,	Alma, Wabaunsee.
Edgar Willis Doane,	Louisville, Pottawatomie.
Cora Alice Doverspike,	Welcome, Geary.
Albert Drager,	Corning, Nemaha.
Walter Dimmick Duffy,	Manhattan, Riley.
Helen Dunaway,	Manhattan, Riley.
Noble Dunn,	Oxford, (Cowley.)
Sarah Gertrude Eakin,	Manhattan, Riley.
Rush Elmore,	Tecumseh, Shawnee.
Albert R. Engle,	Minneapolis, Ottawa.
Robert Alexander Esdon,	Olsburg, Pottawatomie.
Walter Wendell Evans,	Wilsey, Morris.
Rainey Faris,	Denison, Jackson.
Harry Haines Fay,	Wilsey, Morris.
Edward Hempstead Fielding,	Manhattan, Riley.
Elias Bert Fields,	Ft. Gibson, *Indian Territory.*
Samuel Fleishman,	Topeka, Shawnee.
Bessie Ida Flintom,	Alma, Wabaunsee.
Fred Fockele,	Le Roy, Coffey.
James Herman Fritts,	Manhattan, Riley.
David Emerson Gall,	Reserve, Brown.
Maggie Gardenhire,	Alma, Wabaunsee.
Louisa Gerteis,	Derby, Sedgwick.
Harmon A. Gibbs,	Solomon Rapids, Mitchell.
Mary Gibbs,	Industry, Clay.
Randolph Foster Gill,	Pittsburg, Crawford.

Name.	*Post-office and County (or State).*
Clark A. Gingery,	Summerfield, Marshall.
Watt H. Glenn,	Block, Miami.
Robert Dudley Glidden,	Ransomville, Franklin.
Emma Goodpasture,	Alma, Wabaunsee.
Clara Magdalen Gordon,	Horton, Brown.
Guy David Gould,	Solomon, Dickinson.
Myron Gould,	Fairmount, Leavenworth.
John Q. Green,	Homewood, Franklin.
George Grubb,	Netawaka, Jackson.
Jack William Gyles,	Dodge, Ford.
Leroy Erskine Hall,	Bushton, Rice.
Alanson L. Hallsted,	Havana, Montgomery.
George William Hamman,	Strawn, Coffey.
William Lesley Hanlon,	Orie, (Sumner.)
Gertrude Hanson,	Manhattan, Riley.
Hugh P. Harrold,	Manhattan, Riley.
Maude Hart,	Manhattan, Riley.
William Lee Harvey,	Arkalon, Seward.
Fred Willis Haselwood,	Clifton, (Clay.)
John Adams Haulenbeck,	Manhattan, Riley.
Orr Henderson,	Eureka, Greenwood.
Rodney Hermon,	Clyde, Cloud.
Noah E. Hershey,	Donegal, Dickinson.
Eugene Cleon Higgins,	Grand Haven, (Osage.)
Christine Delphine Hofer,	Manhattan, Riley.
Henrietta Mattie Hofer,	Manhattan, Riley.
William Hofman,	Manhattan, (Pottawatomie)
Carl Holman,	Leavenworth, Leavenworth.
Ada Beatrice Hooker,	Manhattan, Riley.
Minerva Ann Howell,	Manhattan, Riley.
James Henry Howey,	Topeka, Shawnee.
Harlow Kenyon Hudson,	Manhattan, Riley.
Delbert Humphries,	Manhattan, Riley.
Lewis Jay Hunt,	Alma, Wabaunsee.
Harold L. Hutchinson,	Hutchinson, Reno.
Stella Janet Irvin,	Manhattan, Riley.
Arthur Jackson,	Manhattan, Riley.
Winfield Emerson Jackson,	New Lancaster, Miami.
Bessie Amanda Jennison,	Shields, Lane.
Herlan Stewart Jennison,	Shields, Lane.
Emma Johnsmeyer,	Cleburne, Riley.
Fred M. Johnson,	Marysville, Marshall.
Walter August Johnson,	Hackney, Cowley.
Georgeanna Jolly,	Manhattan, Riley.
Arie A. Jones,	Langdon, Reno.
Jesse W. Joss,	Fairview, Brown.
Roscoe Ray Keeler,	Centropolis, Franklin.
William Louis Kelly,	Mayetta, Jackson.
Harold Kilbourn,	Sterling, Rice.
John S. Kilgore,	Leavenworth, Leavenworth.
Edgar Willes Kimball,	Manhattan, Riley.

Name.	*Post-office and County (or State).*
Samuel Robert Kimble,	Manhattan, Riley.
Helen Knostman,	Manhattan, Riley.
Anthony Kolsky,	Kanona, Decatur.
George Otto Kramer,	Wabaunsee, Wabaunsee.
Conrad August Kruger,†	Pfeifer, Ellis.
Fred Carl Kruger,†	Pfeifer, Ellis.
Daniel Ladd,	Manhattan, Riley.
Anna Mary Landis,	Brenner, Doniphan.
Jessie Mabelle Lantz,	Waldo, Russell.
George Ezery Lee,	Polo, *Oklahoma.*
Harrie Stancliff Lee,	Manhattan, Riley.
Starr Leek,	Great Bend, Barton.
Mina Linscott,	Milford, Geary.
Albert Dawson Lowry,	Topeka, Shawnee.
Harry Vincent Lowry,	Harris, Anderson.
Otto Meade McAninch,	Manhattan, Riley.
Samuel Burton McAninch,	Manhattan, Riley.
Seba McCall,	Culver, Ottawa.
Carrie Melissa McCord,	Manhattan, Riley.
Stanley McCoy,	Eskridge, Wabaunsee.
Ralph McCracken,	Kensington, Smith.
Charles Alfred McCutchan,	Wabaunsee, Wabaunsee.
Anna Glenn McHugh,	Manhattan, Riley.
Edward James McKee,	Marysville, Marshall.
Amelia Augusta Maelzer,	Neuchatel, Nemaha.
Myrtle Elvina May Marchant,	Manhattan, Riley.
Ernest Burdett Marsh,	McFarland, Wabaunsee.
Charles F. Marshall,	Manhattan, Riley.
George Ellis Martin,	Eureka, Greenwood.
Walter John Martin,	Junction City, (Riley.)
Mary Eleanor Mathewson,	Topeka, Shawnee.
Walter Eldridge Mathewson,	Topeka, Shawnee.
Max Whiters Maxey,	Pomona, Franklin.
Alexander Stephen Maxwell,	Leonardville, Riley.
Elpha Fredericka Meyer,	Menager, Wyandotte.
Emma Maude Miller,	Milford, Geary.
Herbert George Miller,	Conway, McPherson.
Roland Calvin Mitchell,	Florence, Marion.
William Mitchell,	Wabaunsee, Wabaunsee.
William Sylvester Mize,	Olathe, Johnson.
George Mohler,	St. Mary's, Pottawatomie.
Oliver Cromwell Montgomery,	Clyde, Cloud.
Katie Bell Morgan,	Manhattan, Riley.
Marshall E. Morlan,	Welcome, Geary.
Benjamin Frank Mudge,	Manhattan, Riley.
Ruth A. Mudge,	Manhattan, Riley.
Charles Elmer Munkres,	Kelso, Morris.
Jessie May Mustard,	Manchester, Dickinson.
Fred Myers,	Marquette, McPherson.

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† Suspended.

Name.	*Post-office and County (or State).*
James Lawrence Nelson,	St. Louis, *Missouri.*
Merle Edmund Newell,	Manhattan, Riley.
Clara Nitcher,	Ottawa, Franklin.
Martha Nitcher,	Ottawa, Franklin.
Ida Lewis Norton,	Manhattan, Riley.
Margaret Alice Norton,	Manhattan, Riley.
John H. Oesterhaus,	Junction City, Geary.
Clifford Lewis Oldham,	Paola, Miami.
Charlotta Harriet Olin,	Manhattan, Riley.
John Otto Olson,	Vermillion, Marshall.
Carrie Bell Oneel,	Manhattan, Riley.
Charles Martin Paige,	Manhattan, Riley.
Walter E. Pangburn,	Waldo, Russell.
Ernest Cyrus Parks,	Chase, Rice.
Lela Elizabeth Parks,	Manhattan, Riley.
Willis L. Pearce,	Stockdale, Riley.
Daisy Lane Pelham,	San Luis Potosi, *Mexico.*
Walter Peterson,	Monterey, Riley.
Pearl Mabel Phillips,	Manhattan, Riley.
Helena Maude Pincomb,	Hector, Johnson.
Bryant Poole,	Briggs, Geary.
Pearl Jasper Porter,	North Topeka, Shawnee.
Ray Oscar Porter,	Stafford, Stafford.
Harry Pratt,	Museum, Sheridan.
Price Lewious Pritchard,	Manhattan, Riley.
Frank Hoyt Purcell,	Manhattan, Riley.
Arthur Earl Pursel,	Manhattan, Riley.
Bartholomew Quesnoy,	Weir, Cherokee.
William Judson Railsback,	Langdon, Reno.
William Stephen Read,	Sutphen, Dickinson.
George Boyd Rhoades,	Gardner, Johnson.
Harry Hall Richards,	Manhattan, Riley.
Alta Maria Rigg,	Marvin, Phillips.
Eva Talitha Rigg,	Marvin, Phillips.
Leroy Rigg,	Marvin, Phillips.
Herman Hale Riley,	Waverly, Coffey.
Florence Rebecka Ritchie,	Manhattan, Riley.
Kate L. Robertson,	Manhattan, Riley.
Eugene V. Roe,	Silver Lake, Shawnee.
Fred Clarence Roll,	Effingham, Atchison.
George Washington Roll,	Manhattan, Riley.
Frank Adelbert Root,	Gypsum City, Saline.
Maud Ross,	Manhattan, Riley.
Charles R. Sample,	Haysville, Sedgwick.
Eugene Lafayette Sanborn,	Manhattan, Riley.
Peter Henry Sanneman,	Fact, Clay.
Maude Sauble,	Florence, Marion.
Charles A. Scott,	Westmoreland, Pottawatomie.
Wesley Sebring,	Westmoreland, Pottawatomie.
Fred Marten Seekamp,	Mulvane, (Sedgwick.)
Howard Charles Shafer,	Goddard, Sedgwick.

Name.	*Post-office and County (or State).*
Alfred J. Shearer,	Frankfort, Marshall.
Lawrence M. Shearer,	Cawker City, Mitchell.
John Wesley Sherwood,	Manhattan, Riley.
Robert Benjamin Sherwood,	Manhattan, Riley.
Edward Alfred Shirtcliff,	Otego, Jewell.
Ethel Lilian Shofe,	Manhattan, Riley.
Charles Earl Shoffner,	Eureka, Greenwood.
Cora May Shull,	Manhattan, Riley.
Florence Shuyler,	Nickerson, Reno.
Harry Allen Shuyler,	Nickerson, Reno.
Charles Austin Smedley,	Agra, Phillips.
Dorsey H. Smith,	Niles, Ottawa.
Arthur V. Snodgrass,	Little River, Rice.
Florence A. Snodgrass,	Little River, Rice.
John Edwin Snyder,	Newkirk, *Oklahoma.*
William Henry Soupene,	Manhattan, (Pottawatomie.)
Charles Orval Sparks,	Ludell, Rawlins.
John Thomas Stafford,	Garnett, Anderson.
Roscoe Day Stafford,	Leonardville, Riley.
Benjamin Franklin Staver,	Hector, Johnson.
Arthur Stevens,	Sycamore, Montgomery.
Royal Albert Streeter,	Manhattan, Riley.
Adelaide Strite,	Garrison, Pottawatomie.
Ora Day Strong,	McFarland, Wabaunsee.
Anna Odette Summers,	Waterville, Marshall.
Mary Rebecca Sweany,	Fostoria, Pottawatomie.
Lucy A. Sweet,	Stockdale, Riley.
Victor Emanuel Syster,	Reserve, Brown.
Ernest Wilkins Tague,	Manhattan, Riley.
Millie Minerva Tague,	Manhattan, Riley.
Louis Teas,	Welcome, (Wabaunsee.)
Stella Mae Tharp,	Winfield, Cowley.
John O. Thomas,	Bala, Riley.
Barton Thompson,	Garrison, Pottawatomie.
Harry M. Thompson,*	Edwardsville, Wyandotte.
Jesse K. Tilford,	Waverly, Coffey.
Myrtie Lucy Toothaker,	Wheaton, Pottawatomie.
Charles Daniel Townley,	Milan, *Missouri.*
Ralph F. Triplett,	Clay Center, Clay.
Helen Castle True,	Vera, Wabaunsee.
Clayborne C. Turner,	Oakley, Logan.
Pearle Julia Turner,	Rock Creek, Jefferson.
Florence Helen Vail,	Manhattan, Riley.
Harriet Emily Van Everen,	Manhattan, Riley.
Victor Emanuel Vilander,	Cleburne, Riley.
Mary Caroline Wagner,	Enterprise, Dickinson.
Orin Russell Wakefield,	Wilsey, Morris.
Caddie G. Warner,	Manhattan, Riley.
Laura E. Warner,	Longford, Clay.

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* Deceased.

Name.	*Post-office and County (or State).*
Lizzie Mabel Waters,	Berryton, Shawnee.
Noah Philo Way,	Talmo, Republic.
Daniel R. Webster,	Delphos, Ottawa.
Barbara Welter,	Myers Valley, Pottawatomie.
Ernest West,	Neodesha, Wilson.
Herman Henry Wetzig,	Winkler, Riley.
Otto Christian Weyer,	Baileyville, Nemaha.
James Halley Whipple,	Olivet, Osage.
David Dwight White,	Newton, Harvey.
Eleanor Mary White,	Newton, Harvey.
Harry Browning Whitney,	Manhattan, Riley.
Carl Herbert Theodore Widegren,	Morganville, Clay.
Paul Antony Wiedemann,	Alma, Wabaunsee.
Amelia Jennie Wiest,	Manhattan, Riley.
Myron D. Williams,	Manhattan, Riley.
Augustus Packard Winters,	Chapman, Dickinson.
Katharena Winter,	Manhattan, Riley.
Mary Rowena Wolfley,	Ontario, Jackson.
Ai Lacy Worswick,	Oskaloosa, Jefferson.
Lucie Joan Wyatt,	Westmoreland, Pottawatomie.
John Wyse,	Yates Center, Woodson.
John Milton Yard,	Smith Center, Smith.
George Lester Yeakley,	Great Bend, Barton.
Mary Estelle Yenawine,	Manhattan, Riley.
Henry Theodore York,	Rossville, Shawnee.
James Lucien Young,	Stanley, Johnson.
Claude Zirkle,	Richland, Shawnee.

PREPARATORY.

John Henry Barber,	Weigand, *Nebraska.*
Ada Batten,	Manhattan, Riley.
James Beck,	Lansing, Leavenworth.
John Bell,	Manhattan, Riley.
George A. Bigler,	Greenbush, Crawford.
Frank Bertun Bobbitt,	Manhattan, Riley.
Clarence Brullman,	Louisburg, Miami.
George Artie Buell,	Everest, Brown.
Maranda Emery Burton,	Parkerville, Morris.
Lottie Sedonia Callahan,	Stockdale, Riley.
Lula Margaret Callahan,	Stockdale, Riley.
John Edward Carlson,	Clay Center, Clay.
William Elery Catherman,	Tescott, Ottawa.
Bert Cole,	Kelly, Nemaha.
Edwin Cook,	Effingham, Atchison.
Robert O. Dahlstrom,	Alida, (Dickinson.)
Bertha May Dana,	Manhattan, Riley.
Stella Jane Davis,	Delphos, Ottawa.
William J. Davis,	Arvonia, Osage.
John Virgil Dedrick,	Leon, Butler.
Joseph F. Demain,	Wendell, Edwards.
Roy Nathan Dorman,	Wabaunsee, Wabaunsee.

Name.	*Post-office and County (or State).*
Ella Augusta Drager,	Corning, Nemaha.
Elijah Edmonds,	McLouth, Jefferson.
Carl Hjalmer Erickson,	Marquette, McPherson.
Ben Ganoung,	Manhattan, Riley.
Dell Ganoung,	Manhattan, Riley.
Walter Gilman,	Baldwin, Douglas.
Byron Ash Ginter,	Winchester, Jefferson.
Mamie E. Ginter,	Winchester, Jefferson.
William H. Ginter,	Winchester, Jefferson.
Arthur Daniel Hallmark,	White City, Morris.
John Hansen,	Willis, Brown.
Joseph Hardy,	Pleasanton, Linn.
George Haulenbeck,	Manhattan, Riley.
May Hedrick,	Lincoln Center, Lincoln.
Frank Ferris Hillyer,	Wilsey, Morris.
Walter J. Hoar,	Manhattan, Riley.
Fenwick Harvey Hunt,	Leon, Butler.
Oliver Brooken Jeffers,	Fredonia, Wilson.
Gustaf Johnson,	Stitt, Dickinson.
Ida Matilda Johnson,	Melvern, Osage.
Anna T. Kelley,	Wheaton, Pottawatomie.
Thomas Kelly,	Ogden, Riley.
Albert Krotzer,	Manhattan, Riley.
Alfred G. Lawson,	Marquette, (Ellsworth.)
John Wesley Lewis,	Manhattan, Riley.
Anton Lunden,	Morganville, Clay.
Thomas E. McCurry,	Milo, Lincoln.
Elesa Carrie Maas,	Alma, Wabaunsee.
Richard Henry Maas,	Alma, Wabaunsee.
Otto John Marhenke,	Eureka, Greenwood.
James Alva Masheter,	Sabetha, Nemaha.
Alvine Otto Meyer,	Menager, Wyandotte.
John Michaud,	St. Joseph, Cloud.
Mary Josephine Monahan,	Manhattan, Riley.
Anna V. O'Keefe,	Meriden, Jefferson.
John Eugene Phillips,	Stockton, Rooks.
Emory Plumb,	Abilene, Dickinson.
Albert W. Porter,	North Topeka, Shawnee.
Theodore Sauble,	Florence, Marion.
Paul Schmitz,	Alma, Wabaunsee.
John Marcus Scott,	Westmoreland, Pottawatomie
William Lyman Shaffer,	Fulton, Bourbon.
Osborne Perry Shearer,	Cawker City, Mitchell.
Edward Lincoln Sherwood,	Manhattan, Riley.
Weston Shoffner,	Eureka, Greenwood.
Frank H. P. Smith,	Manhattan, Riley.
Herbert Paul Stebbins,	Atchison, Atchison.
Clarence Garfield Stump,	Manhattan, Riley.
Kate Brown Tilton,	Detroit, Dickinson.
Hezekiah Tracy,	New Lancaster, Miami.
Margaret Welter,	Myers Valley, Pottawatomie.

Name.	*Post-office and County (or State).*
Albert Francis Wilson,	Strong City, Chase.
Bert Zirkle,	Bushton, Rice.
Ed. H. Zirkle,	Richland, Shawnee.
William Edward Zirkle,	Richland, Shawnee.

SPECIAL STUDENTS.

Louise Burnham,	Alma, Wabaunsee.
Reppie Carey,	Manhattan, Riley.
Guy Irl Chamberlin,	Maize, Sedgwick.
William Chester Coleman,	Sabetha, Nemaha.
Lucian C Freeland,	Almena, Norton.
John Chris Gartner,	Fort Riley, Geary.
Marion Gilkerson,	Manhattan, Riley.
Anna Winter Hall,	Manhattan, Riley.
Elmyra Harrison,	Greenfield, *Missouri.*
James Ambrose Paddock,	Manhattan, Riley.
Vard Ramsour,	Briggs, Geary.
Jennie May Selby,	Manhattan, Riley.
Minnie Trimmer,	Topeka, Shawnee.
Elmer H. White,	Groveland, McPherson.
Herbert Milton Young,	Conway, McPherson.

DAIRY STUDENTS.

Claude Raymond Bardrick,	Miltonvale, Cloud.
W. D. Borgen,	Belleville, Republic.
Harold Theodore Nielsen,	Denmark, Lincoln.
John Eugene Phillips,	Stockton, Rooks.
Royal Samuel Wood,	Strong City, Chase.
Frederick Zimmerman,	Moray, Doniphan.

APPRENTICES.

George W. Dexter,	Home, Marshall.
Charles A. Geist,	Alida, Geary.
Watt H. Glenn,	Block, Miami.
Jack William Gyles,	Dodge City, Ford.
Porter Hayse Rader,	Manhattan, Riley.
George Boyd Rhoades,	Gardner, Johnson.
Eugene Lafayette Sanborn,	Manhattan, Riley.
Theodore Sauble,	Florence, Marion.
Howard Charles Shafer,	Goddard, Sedgwick.

LIBRARY HALL. MAIN BUILDING. CHEMICAL LABORATORY.

SUMMARY.

CLASSES.	*Gentlemen.*	*Ladies.*	*Total.*
Postgraduate	33	24	57
Fourth year	44	38	82
Third year	49	28	77
Second year	104	70	174
First year	216	100	316
Preparatory	62	15	77
Special	8	7	15
Dairy	6	....	6
Apprentices	9	....	9
Counted twice	10	....	10
Totals	521	282	803

From 83 counties of Kansas, 771.
From 14 other states, 32.
Applicants not enrolled, 17.

RECORD OF ATTENDANCE, 1879-1898.

COLLEGE YEAR.	*Dairy*	*Apprentices*	*Special*	*Preparatory*	*First year*	*Second year*	*Third year*	*Fourth year*	*Postgraduate*	*Counted twice*	*Total*	*Graduated*
1878–79	...	...	....	....	90	89	16	12	......	....	207	9
1879–80	...	...	....	....	167	61	35	11	2	....	276	7
1880–81	...	...	....	....	184	48	24	9	2	....	267	8
1881–82	...	...	....	....	232	50	19	11	......	....	312	9
1882–83	...	...	....	....	245	60	30	12	......	....	347	12
1883–84	...	...	....	....	257	92	26	18	2	....	395	17
1884–85	...	...	....	....	274	71	36	16	5	....	402	14
1885–86	...	...	....	....	274	91	35	24	4	....	428	21
1886–87	...	...	....	....	312	96	44	24	7	....	485	21
1887–88	...	...	....	....	305	92	46	27	2	....	472	22
1888–89	...	...	....	....	266	103	41	28	7	....	445	25
1889–90	...	...	....	....	307	105	63	28	11	....	514	27
1890–91	...	...	....	....	343	135	50	53	12	....	593	52
1891–92	...	...	....	....	336	139	62	37	10	....	584	35
1892–93	...	...	....	....	339	110	66	43	29	....	587	39
1893–94	...	...	....	....	275	141	72	42	25	....	555	40
1894–95	...	...	5	....	276	108	89	64	30	....	572	57
1895–96	...	...	3	....	353	121	67	71	32	....	647	66
1896–97	...	...	6	67	321	163	69	62	46	....	734	55
1897–98	6	9	15	77	316	174	77	82	57	10	803	....

History and Resources.

An act of Congress, approved July 2, 1862, gave to each state public lands to the amount of 30,000 acres for each of the senators and representatives in Congress according to the census of 1860, for the "endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Under this act, the state of Kansas received 82,313.53 acres of land, and, in 1863, established the State Agricultural College, by endowing with these lands Bluemont College, which had been erected two miles from Manhattan, under the auspices of the Methodist Episcopal Church, but was presented to the state for the purpose named in the act of Congress.

In 1873 the College was reorganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 223 acres, one mile from the city of Manhattan. On this fine location the state has provided buildings costing $216,000; of these a description is given elsewhere. The farm and grounds, furniture, stock and other illustrative apparatus cost $183,000. The entire College estate comprises 323 acres, 100 lying one mile west of the College in two tracts of 20 and 80 acres, respectively. The present value of buildings, grounds, apparatus, etc., is almost equal to the sum of all appropriations by the state. Nearly all the lands have been sold, giving a fund of $503,035.60, which is by law invested in bonds, the interest alone being used for the current expenses of the College.

The annual income from the endowment fund — about $28,000 — is supplemented by an appropriation under an act of Congress approved August 30, 1890, of $15,000 for 1890, and a sum increasing each year by $1,000 until the annual amount shall be $25,000. This fund, now $24,000, is "to be applied only to instruction in agriculture, the mechanic arts and the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." "No portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings."

All the expense of instruction is thus provided for, and the state is left to erect and maintain the necessary buildings and meet expenses in management of the funds.

Under an act of Congress approved March 7, 1887, the College receives, by annual appropriations in Congress, $15,000 a year for the maintenance of an experiment station, "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The property of the Station, including a building erected especially for its use, amounts to more than $16,000.

Grounds and Buildings.

The College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing towards the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted, according to the design of a professional landscape gardener, while well-graveled drives and good walks lead to the various buildings. All of these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and all are heated by steam or hot water. A complete system of sewerage has been provided. The buildings stand as indicated in the plat accompanying the following description :

College, 152 x 250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices of President and Secretary, cloak-rooms, studies, chapel, printing-office, and seventeen classrooms.

Chemical laboratory, one story, 26 x 90 and 46 x 75 feet of floor space, in form of a cross. It contains seven rooms, occupied by the department of chemistry and mineralogy.

Mechanics hall, 39 x 103 feet, two stories, and 40 x 80 feet, one story, occupied by wood and iron shops, finishing shop, and classroom. A foundry, 32 x 42 feet, is attached.

A central steam plant furnishes heat and power to the buildings.

Horticultural hall, 32 x 80 feet, one story and cellar, having museum, class-room, and storage, with greenhouse attached.

Horticultural laboratory, with six propagating houses attached.

Armory and entomological laboratory, 46 x 96 feet, two stories. This building, which has served many purposes, is now fitted for an armory and drill room below, and for entomological class-room, laboratory, and museum, and veterinary museum, above.

Library and agricultural science hall, 100 x 140 feet, three and four stories. This building provides permanent quarters for the library, with ample reading-room; classrooms, laboratories, and cabinet room for zoölogy, veterinary science, and botany; a classroom for use in history and economics; and suitable rooms for various College societies.

Domestic science hall, 84x70 feet, contains two stories and basement. The first story and the basement are occupied by the department of household economics, lunches to students and members of the faculty being served in the basement. The second floor is occupied in part by the department of music and in part by that of sewing.

The farm barn is a double but connected stone structure, 50x75 feet and 48x96 feet, with an addition of sheds and experimental pens 40x50 feet. A basement, having stalls for seventy-five head of cattle, silos, motor room, and granaries, underlies the entire structure.

The horticultural barn is a stone building, containing storeroom, granary, and stables for several horses.

The foundries, lumber house, implement house, piggery and various outbuildings are of wood.

One stone dwelling, occupied by the professor of agriculture, and one frame dwelling, occupied by the teamster of the farm.

LIBRARY.

The library consists of 18,559 bound volumes and about 5500 pamphlets, including 1199 volumes belonging to the Experiment Station. It has been selected mainly with a view to supplementing the classroom instruction in the various departments. All the books are indexed in a card catalogue, so that the resources of the library upon any subject may be readily learned. All students have free access to the bookshelves, and may draw the books for home use, under simple and most liberal regulations.

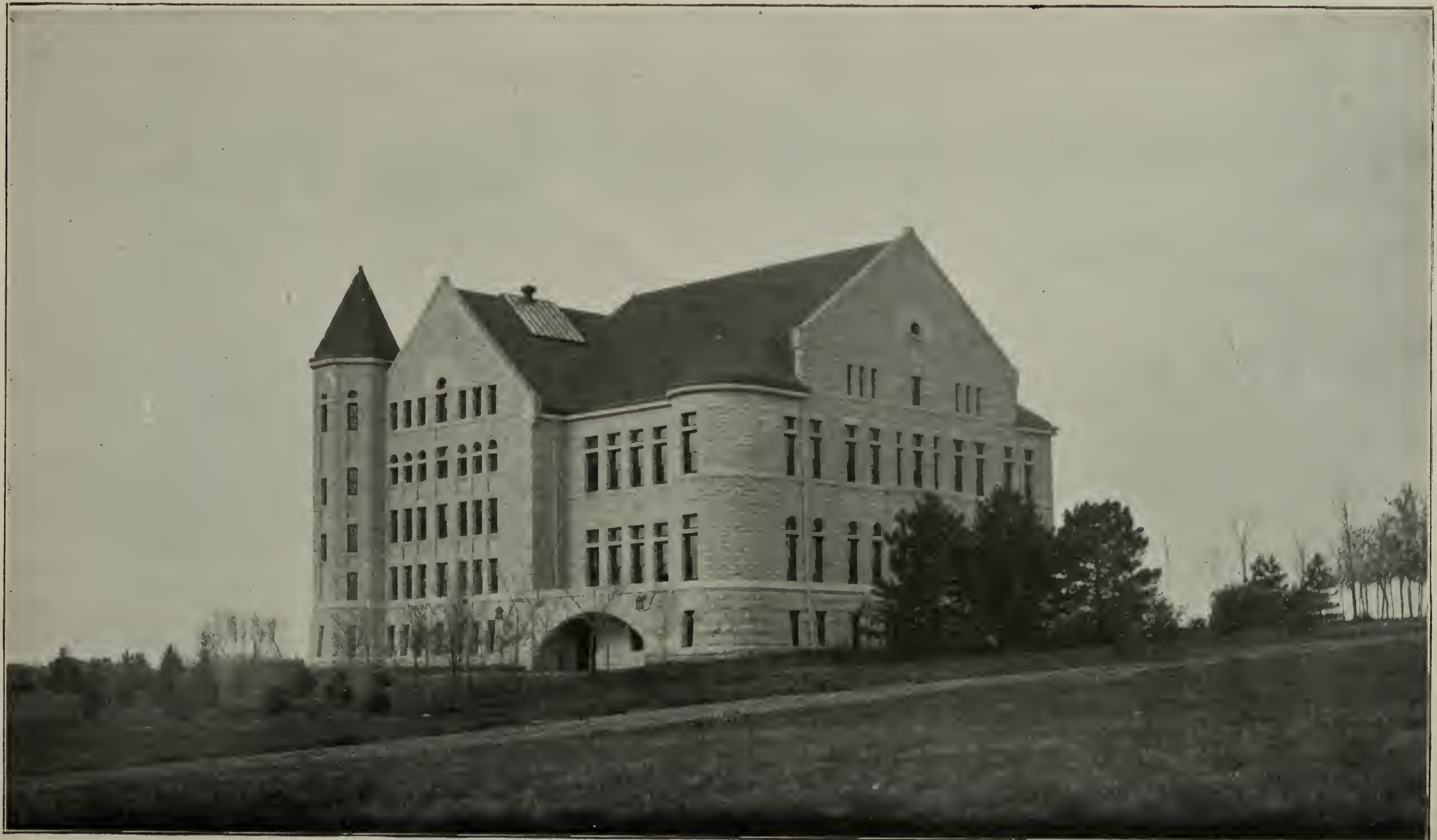
The College subscribes for the leading literary, scientific and agricultural journals; while the principal daily and weekly papers of Kansas, and many from other states, are received in exchange for the College publications. All these are kept on file for the use of students and Faculty.

The College has been designated as a depository of United States public documents for the fifth congressional district of Kansas, and 2102 volumes have already been received on this account.

The library is open daily, except on legal holidays, from 7 A. M. to 6 P. M. The librarian or the assistant is in constant attendance at these hours to assist those who use the books.

An approximate estimate of the number of books, including public reports and bound periodicals, by classes, is as follows:

Classes.	*Vols.*	*Classes.*	*Vols.*
Agriculture	2290	Logic and philosophy	175
Horticulture	560	General science	690
Mechanics and engineering	495	Geography and travels	240
Mathematics and astronomy	260	Dictionaries and cyclopedias	180
Physics and meteorology	305	Education	345
Chemistry and mineralogy	480	Law	185
Geology	300	Administrative reports	360
Botany	792	Public documents on deposit	2100
Zoology and entomology	560	Fiction	480
Biology	100	Poetry	190
Medical and veterinary science	350	Religion and morals	500
Military science	90	Fine arts	190
Domestic science	125	Bound magazines	1365
Economic science	525	Music	61
History and political science	1420	History of industry	200
Printing	60	Oratory	60
Industrial art and design	170	Experiment station bulletins and reports,	507
English language and literature	1005	Miscellaneous books	59



LIBRARY HALL.

Objects.

This College now accomplishes the objects of its endowment in several ways:

First. It gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are afforded in all its departments, while students are kept in sympathy with the callings of the people.

Second. It teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, botany, entomology, zoölogy and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science; and all are enforced by actual experiment.

Third. It trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household department is made a part of the general education for usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth. It strives to increase our experimental knowledge of agriculture and horticulture. The provision for extensive and accurate researches, made by establishing the Experiment Station as a distinct department of the College, offers assurance of more definite results than can be obtained by ordinary methods. The professors of agriculture, horticulture and entomology, chemistry, botany, and veterinary science, together with the Secretary and the President of the College, form the Experiment Station Council. By authority of the President, subject to the Board of Regents, experiments are undertaken and carried on in the several departments, under the special supervision of the professors. These touch "the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses for forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable." The bulletins of the Station, issued at least as often as once in three months, and amounting to not less than 40,000 copies during the year, are sent, according to law, free of postage, to all newspapers in the state, and "to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." Correspondence with reference to bulletins and experiments is welcomed, and may be addressed to the President or to the several members of the Council.

Fifth. It seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose, farmers' institutes have been organized in about sixty counties of the state, in which two members of the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers and their families. These institutes, held for the past fifteen years, have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented. Members of the Faculty are also prominently connected with the state associations for the promotion of agriculture, horticulture, the natural sciences, and education in general. Correspondence as to farmers' institutes or any questions of practical interest in agriculture or related sciences is desired.

Sixth. It seeks to awaken the agricultural and industrial classes to a realization of the fact that their prosperity and progress depend not alone upon their efficiency as producers, but in part as well upon the operation of the principles of distribution and exchange; overproduction and poverty often going hand in hand.

The *Industrialist*, published ten times per year, and edited by the Faculty, and the weekly *Students' Herald*, edited by students, both publications being products of the College printing office, give a wide circulation to matters of interest to the College.

COURSES OF STUDY.

With a view to providing for the wants of the various classes of students, the following four courses of study are offered. The student is advised to consult with parents and teachers, and choose carefully his course; since, while a transition from one course to another is not impossible, it cannot be made without some degree of loss and hardship.

Fuller explanations of the different courses and studies are found under "Outline of Instruction."

The figures in the tables following show number of hours devoted in class to the given subject per week. Subjects in *italic type* require no study outside of class. *Military drill* in third and fourth years is optional.

See pages 36–39.

COURSES OF STUDY.

		Agricultural Course.		*Engineering Course.*		*General Course.*		*Household Economics Course.*	
FIRST YEAR.	*Fall Term.*	Algebra	5	Algebra	5	Algebra	5	Algebra	5
		Bookkeeping and Commercial Law	5	Bookkeeping and Commercial Law	5	Bookkeeping and Commercial Law	5	Bookkeeping and Commercial Law	5
		Elementary Economics	2	Elementary Economics	2	Elementary Economics	2	Elementary Economics	2
		English Analysis	5	English Analysis	5	English Analysis	5	English Analysis	5
		Free-hand Drawing	2½	*Free-hand Drawing*	2½	*Free-hand Drawing*	2½	*Free-hand Drawing*	2½
		Industrial (Shop)	5	*Industrial*	5	*Industrial*	5	*Industrial* (Sewing)	5
		Military Drill	5	*Military Drill*	5	*Military Drill*	5		
	Winter Term.	Algebra	5	Algebra	5	Algebra	5	Algebra	5
		Agriculture	5	English Composition	5	English Composition	5	English Composition	5
		English Composition	5	Physics	5	Hygiene	2	Hygiene	2
		Hygiene	2	*Geometrical Drawing*,	2½	Oratory	3	Oratory	3
		Free-hand Drawing	2½	*Industrial*	5	*Free-hand Drawing*	5	*Geometrical Drawing*,	2½
		Industrial (Shop)	5	*Military Drill*	5	*Industrial*	5	*Industrial* (Sewing)	5
		Military Drill	5			*Military Drill*	5		
	Spring Term.	Botany	2	Algebra	5	Algebra	5	Geometry	5
		English Structure	5	English Structure	5	Botany	2	Botany	2
		Geometry	5	Geometry	5	Elementary Physics	5	Elementary Physics	5
		Physics	5	*Free-hand Drawing*	5	English Structure	5	English Structure	5
		Free-hand Drawing	2½	*Industrial*	5	*Geometrical Drawing*,	2½	*Free-hand Drawing*	2½
		Industrial (Shop)	5	*Military Drill*	5	*Industrial*	5	*Industrial* (Sewing)	5
		Military Drill	5			*Military Drill*	5		

COURSES OF STUDY.

		Agricultural Course.	*Engineering Course.*	*General Course.*	*Household Economics Course.*
SECOND YEAR.	*Fall Term.*	Hygiene of Farm Animals 3 Botany 2 Geometry 5 Tillage and Fertility 5 Chemistry: (*a*) Class work 5 (*b*) *Laboratory* 2½ *Industrial* (Hortic'lture) 5 *Military Science* (*or Drill*) 5	Geometry 5 Projection Drawing 5 Chemistry: (*a*) Class work 5 (*b*) *Laboratory* 2½ *Industr'l and Lectures,* 10 *Military Science* (*or Drill*) 5	Botany 2 Theme Writing 5 Oratory 5 Chemistry: (*a*) Class work 5 (*b*) *Laboratory* 2½ *Industrial* 5 *Military Science* (*or Drill*) 5	Botany 2 Theme Writing 5 Oratory 5 Chemistry: (*a*) Class work 5 (*b*) *Laboratory* 2½ *Industrial* 5
	Winter Term.	Botany 2 Dairying 5 General History 5 Horticulture 3 Chemistry: (*a*) Class work 5 (*b*) *Laboratory* 2½ *Industrial* (Dairying) 10 *Military Science* (*or Drill*) 5	Chemistry 5 General History 5 Trigonometry 5 *Projection Drawing* 5 *Industrial* 5 *Military Science* (*or Drill*) 5	Geometry 5 General History 5 Agriculture 5 Chemistry: (*a*) Class work 5 (*b*) *Laboratory* 2½ *Industrial* 5 *Military Science* (*or Drill*) 5	Horticulture 3 General History 5 Household Economics 5 Chemistry: (*a*) Class work 5 (*b*) *Laboratory* 2½ *Industrial* 5 *Dressmaking* 2
	Spring Term.	Crop Production 5 Entomology 5 Physiology 5 United States History 5 Analytical Chemistry, including *Laboratory work* 10 *Military Science* (*or Drill*) 5	Analytical Geometry 5 United States History 5 Analytical Chemistry, with *Laboratory work* 10 *Projection Drawing* 5 *Industrial* 5 *Military Science* (*or Drill*) 5	Geometry 5 Physiology 5 United States History 5 Analytical Chemistry, including *Laboratory work* 10 *Military Science* (*or Drill*) 5	Geometry 5 Physiology 5 United States History 5 Analytical Chemistry, including *Laboratory,* 10

COURSES OF STUDY.

		Agricultural Course.		*Engineering Course.*		*General Course.*		*Household Economics Course.*	
THIRD YEAR.	*Fall Term.*	Agricultural Chemistry	5	Calculus	3	Principles of Economics	5	Principles of Economics	5
		Economic Science	5	Economic Science	5	Projection Drawing	2½	Vegetable Gardening and Small Fruit Culture	5
		Vegetable Gardening and Small Fruit Culture	5	Mechanics	2	Rhetoric	5	Rhetoric	5
		Theme Writing	5	Theme Writing	5	Trigonometry	5	Home Architecture	2½
		Oratory	5	*Axonometric Drawing*	5	*Industrial*	5	*Industrial*	5
				Industrial	5				
	Winter Term.	Civics	5	Calculus	3	Biology	5	Biology	5
		Chemistry of Foods (half term) Stock Feeding (½ term)	5	Civics	5	Civics	5	Civics	5
		Biology	5	Descriptive Geometry	5	Dynamic Geology	5	Dynamic Geology	5
		Agricultural Mechanics	2	Mechanics	2	Chemistry of Foods (half term) Projection Drawing (half term)	5	Chemistry of Foods (half term) Floriculture (half term)	5
		Physical Botany:		Oratory	3	*Industrial*	5	*Industrial*	5
		(*a*) Class work	3	*Industrial and Lectures*	10				
		(*b*) *Laboratory*	5						
	Spring Term.	Stock Feeding	3	Calculus	2	Elective	5	Household Economics	5
		Breeds and Breeding	5	Hydraulics	2	Nineteenth Century History	5	Nineteenth Century History	5
		Dynamic Geology	5	Machine Design	10	Oratory	5	Oratory	5
		Cryptogamic Botany:		Physics	3	Perspective and *Sketching*	2½	Ornamental Gardening	2½
		(*a*) Class work	2	Principles of Mechanism	5	*Industrial*	5	*Industrial*	5
		(*b*) *Laboratory*	5	*Perspective and Sketching*	2½				
		Industrial (Horticulture)	5	*Industrial*	7½				

COURSES OF STUDY.

		Agricultural Course.		*Engineering Course.*		*General Course.*		*Household Economics Course.*	
FOURTH YEAR.	*Fall Term.*	Agricult'al Bacteriology,	5	Industrial History......	5	Elective..................	5	Hygiene................	5
		Comparative Anatomy..	2	Mechanics of Materials,	5	Industrial History......	5	Dairying	5
		Pomology	3	Physics	5	Physics	5	Physics	5
		Industrial History......	5	Measurem't of Power, *Engineering Laboratory*.......	5	*Industrial*.............	5	*Industrial* (Dairying)..	5
		Physics	5	*Industrial*........	5				
		Industrial (Farm).....	5						
	Winter Term.	Agricultural Physics....	5	Economic Problems.....	5	Economic Problems.....	5	Economic Problems.....	5
		Comparative Anatomy..	2	English Literature......	5	Literature..............	5	Literature..............	5
		Economic Problems.....	5	Machine Designing.....	5	Physics	5	Physics	5
		Horticulture...........	5	Mechanics of Engineering..................	5	Botany:		Physiological Botany:	
		Literature..............	5	Oratory	3	(*a*) Class work.......	3	(*a*) Class work.......	3
		Oratory...............	5	*Industrial*.............	5	(*b*) *Laboratory*	5	(*b*) *Laboratory*	5
	Spring Term.	Agricultural Economics,	5	Engineering of Power Plants...............	5	Finance	5	Finance	5
		Finance	5	Finance	5	Nineteenth Century Literature..............	5	Nineteenth Century Literature..............	5
		Forestry................	3	Original Designing	10	Psychology and Logic...	5	Psychology and Logic...	5
		Veterinary Science......	5	Thesis.		Thesis.		Thesis.	
		Thesis.							

EXTENDED COURSE.

Considering the entrance requirements of the institution, the four years' course of study is brief. Where practicable, students are advised to extend their course to five years. For students desiring to do this, additional work will be arranged in departments in which they may desire to specialize. Work done in the extended course may receive special mention on the diploma and be counted against requirements for the second degree.

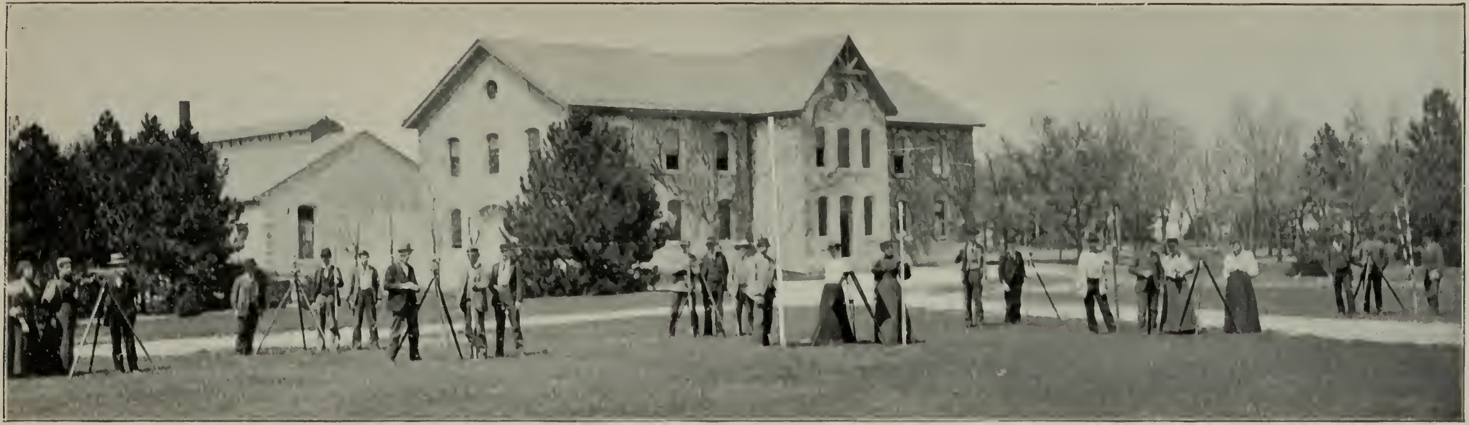
ARCHITECTURAL COURSE.

Work for engineering students who intend to follow pursuits in any of the various lines of designing, building and decoration is offered, as follows: In the spring term of the third year, architectural details, arches, trusses, stairs, and roofs, in place of machine design. In the fall of the fourth year, historic ornament, façades, and decoration, in place of measurement of power. In the winter of the fourth year, water-supply, sewers, heating, ventilation, and specifications, in place of measurement of power and engineering laboratory. In the spring term of the fourth year, original architectural designing and photographing.

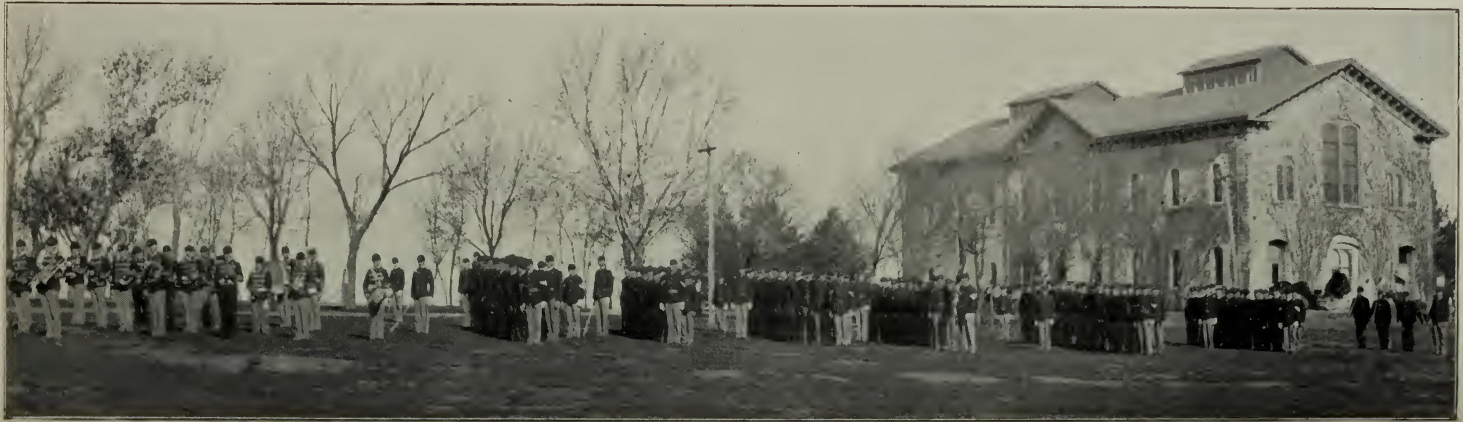
INDUSTRIAL TRAINING.

Closely adjusted to the course of study is industrial training in several of the arts, to which each student is required to devote at least one hour a day throughout almost his entire course. Among the lines of training, each student may select, with the approval of the Faculty, except in terms when special industrials are required. Young men may have farming, gardening, fruit-growing, woodwork, ironwork, or printing. Young women may take cooking, sewing, printing, floriculture, or music. The training in these departments is designed to be systematic and complete in each, so that a student following a single line diligently through the four-years' course gains the essentials of a trade and a reasonable degree of skill. Those who wish only a general training in the arts can take shorter courses in several of them.

The young men taking the agricultural course are required to have their industrial in the carpenter and blacksmith shops during the first year, in order to gain sufficient skill in handling tools to be able to do the wood and iron work commonly needed on the farm. In the fall term of the second year and the spring term of the third year they have work in the orchards and gardens. In the winter term of the second year dairy industrial is required, and practice given in running hand separators, Babcock testers, and in butter-making. In the fall term of the fourth year the industrial is in field and feeding work.



SURVEYING SQUADS.—IRON AND WOODWORK SHOPS.



COLLEGE BATTALION.

Industrial classes in dairying will be organized during the fall and spring terms for those who wish to take this work as a special study, ten hours per week being required.

Dairying is required as the industrial in the fourth year, fall term, of the household economics course. In the same course sewing industrial must be taken throughout the first year; while three terms of cooking industrial are required, one at least of which must be taken in the second year.

COURSES FOR APPRENTICES.

In the Shops.—In the College shops opportunities are offered to obtain practical skill in blacksmithing, foundry and machine-shop practice. The iron shops will accommodate about 100 men, and in the afternoon they are worked well toward their full capacity. The advantages of the shops are offered free to a limited number of young men who cannot enter regularly into the College classes. The course is distinctly an apprentice course, but the apprenticeship will be in such a place as will render instruction rather than money-making the object. The requirements are as follows: Young men must be at least eighteen years of age, must observe College regulations, must agree to work at least thirty hours a week in the shops, and to stay at least forty weeks. No charges of any kind are made; nor is any pay given to the apprentices. The apprentices will be given instruction in blacksmithing until simple forgings can be made and tools of various kinds shaped and tempered. Practice in the foundry will include regular floor and bench molding of general machine castings, core making, and cupola management; finer bench molding in brass may also be practiced, including the mixing of various alloys. In the machine-shop, vise work, chipping, filing, fitting and scraping will be followed by lathe work in great variety. The use of the many tools with which the shop is equipped—lathes, drill-presses, planer, shaper, milling machine, and universal cutter-grinder—will be taught. The shop builds regularly a number of machines, and a considerable variety of work is always in progress.

In the Printing Office.—In our printing department superior facilities are offered to young men and young women desiring to learn the practical work of a newspaper office. Instruction is the main object always kept in view, and ample opportunity for the gaining of a measure of experience and skill is afforded by the publication of the weekly *Students' Herald*, the issuing of the monthly *Industrialist*, the execution of the wide range of job printing needed to supply the various College departments with blanks and stationery and the College societies with programs, notices, etc., and in the varied operations necessary to do all this economically and expeditiously. As in the case of the shops, the advantages of the printing office are offered free to a limited number of those who cannot enter regularly into the College classes. Here also instruction rather than money-making is the object. The requirements are the same as above mentioned.

In both shops and printing office a course of at least eighty weeks is recommended.

POSTGRADUATE COURSES.

Arrangements can be made for advanced study in the several department at any time, and outlines of courses will be furnished on application. The electives of the Extended Course are open to graduates, and special opportunities will be given for investigation and research. Every facility for advancement in the several arts taught at the College will be afforded such students, though they are not required to pursue industrial training while in these courses.

DEGREES.

The degree of bachelor of science is conferred upon students who complete the full course of four years and sustain all the examinations. This degree entitles the holder to credit for studies pursued in any application for state teacher's certificate. (See Laws of 1893.)

Students who extend the course one full year will receive mention on the diploma of special proficiency in those lines of study which they have pursued as an elective for not less than three terms.

The degree of master of science is conferred in course upon graduates who comply with the following conditions:

1. Upon candidates resident at least one year, the degree may be conferred at the end of a two-years postgraduate course; upon non-resident candidates, the degree may be conferred at the end of a three-years postgraduate course; upon candidates who have taken a five-years Extended Course or its equivalent, it may be conferred at the end of a one-year postgraduate course. These courses must be outlined by, or be acceptable to, the Faculty.

2. Each candidate shall furnish evidence satisfactory to the Faculty of proficiency in one of the following arts: Agriculture, horticulture, engineering, architecture, designing, household economics; and in a science or group of sciences related thereto. Either a science or an art may constitute the student's major study; in either case his studies are expected to bear upon the distinctive work of the institution.

3. Each candidate must present for consideration by the Faculty a satisfactory thesis, involving original research in the line of his major study, and shall deposit a perfect copy in the College library.

4. Application to the Faculty for sanction of the lines of study and research should be made as early as the 1st day of November.

5. The subject of the thesis must be settled upon as soon as the 1st day of January preceding the commencement at which the degree is expected.

In a resident postgraduate course of study, as provided for by rule 1, the work required shall be the equivalent of that necessary to pursue three full studies, the time in the aggregate to be divided approximately into three equivalents, two to the major and one to the minor study.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of master of science may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

2. His postgraduate study shall have been in line with that required of graduates of this College, as published in our catalogue.

3. He must make application for the degree on or before the 1st day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1, an abstract of the thesis must be submitted to the Faculty.

5. Before May 15, the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

SPECIAL COURSES.

Persons of suitable age or advancement, who desire to pursue such branches of study as are most directly related to agriculture or other industries, may select such studies under the advice of the Faculty.

Outline of Instruction.

Agriculture.

1. *First Principles of Agriculture.* First year, winter term. Treating of plant growth; the origin, formation, composition, tillage and improvement of soils; the production, care and application of farm manures; the selection of seed and raising of ordinary farm crops; selection, breeding and feeding of farm animals; farm dairying; marketing of farm products. A brief view of the elementary principles of scientific agriculture as applied to Kansas conditions. Five hours per week. Text-book, Voorhees' First Principles of Agriculture. Lectures.

2. *Tillage and Fertility.* Second year, fall term. The management of the soil for maintaining and increasing its productivity, with special study of the conservation of moisture. Includes a study of the nature, functions, texture and wasting of soils, with the amount and availability of plant food in soils; practical methods of rendering more plant food available; plows and plowing, and other implements and methods of tillage; the conservation of soil moisture; farm manures; nitrification; cover crops, fallows, and improvement of soils by clovers and alfalfa; rotations. Five hours per week. Text-books, Roberts's Fertility of the Land, and King's The Soil. Lectures.

3. *Dairying.* Second year, winter term. Milk—its secretion, nature, and composition; causes and conditions influencing the quality and quantity of milk; handling of milk for the market and for buttermaking, including milking, straining, aërating, cooling, preserving, and shipping; creaming of milk by gravity methods and by the separator; cream ripening and churning; washing, salting, working, packing and marketing butter. Five hours per week. Text-book, Wing's Milk and its Products. Lectures. Class work will be supplemented by work in the dairy room, where students will be given practice in running the hand separator, ripening and churning cream, washing, salting, working, printing and packing butter, and care of dairy utensils and machines, carrying on all operations as they should be conducted to secure profitable returns on Kansas dairy farms. Analyzing by the Babcock method milk, cream, skim-milk, and buttermilk, with the object of learning how to avoid the large losses frequent on many dairy farms.

4. *Crop Production.* Second year, spring term. What crops to raise; preparation of the soil; selection of seed; methods of planting; treatment after planting and harvesting of grain, grass, root and forage crops; improvement of the seed of farm crops by selection, crossing, breeding, and special treatment. Careful study required of the methods of crop production used on the College farm, and notes on observations of our experimental field work. Five hours per week. Lectures and study of experiment-station publications treating on the subject.

5. *Stock Feeding.* Third year, winter term, half study; spring term, full study. The properties of feed stuffs, and their combination to secure good returns at least cost with products having the desired qualities; effect of foods on quality of products; preparation of feeds; methods of feeding; care and shelter of farm animals; construction of farm buildings and appliances to secure best returns from feed and for saving labor; review of experimental work in stock feeding. Five hours per week. Text-book, Henry's Feeds and Feeding. Lectures.

6. *Breeds and Breeding.* Third year, spring term. History and characteristics of the breeds of live stock, and their adaptability to Kansas conditions; laws of heredity, atavism; law of correlation; variation; conditions affecting fecundity; in-and-in-breeding and cross-breeding; form as an index of qualities; selection and judging of live stock; compiling pedigrees. Five hours per week. Text-book, Miles's Stock-Breeding. Lectures.

7. *Agricultural Economics.* Fourth year, spring term. Selection, equipment and management of the farm; farm labor, buildings, and machinery; field and feeding experiments; study of the markets for farm products; agricultural history. Five hours per week. Lectures. Library references.

8. *Dairying.* Fourth year, fall term. This occurs in the household economics course. It will be in most respects identical with course 3, dairying, in the second year of the agricultural course, with such modifications as may be necessary to particularly adapt it to the needs of young women.

Means of Illustration. Two hundred and eighty acres of land used for farm purposes, with plats under experiment in grains, grasses, and forage crops; and illustrating various methods of culture and rotation.

A barn 50 x 75 feet, expressly arranged for experimental uses; and connected with it a general-purpose barn, 48 x 96 feet, for grain, hay, horses, and cattle. Both buildings are of stone, and are provided with an electric motor, run by the central heating plant of the institution.

The barn is equipped with improved machinery for shelling, grinding, thrashing, and cutting for the silo.

Two piggeries — one of ten pens, for experimental uses, and one of six pens, with separate yards, for general purposes.

An implement house 22 x 50 feet, of two stories; and corn-cribs.

Farm implements of improved patterns.

Collections of grains, grasses, and forage plants.

The Dairy School.

The Kansas State Agricultural College will conduct its second annual dairy school, January 3 to March 25, 1899, the plan being to give thorough, practical instruction adapted to dairying on Kansas farms.

Many Kansas farmers sell their milk to creameries. The need of these farmers is knowledge of feeding, handling and selecting dairy cows, and of the care of milk. Especial attention is given this part of the work.

The dairy school is designed for private dairymen only. The College at present does not possess facilities for giving instruction in creamery or factory work, and those desiring such instruction are not expected.

GENERAL INFORMATION.

Expenses. Text-books will cost $1.90, blank books for recording lectures, 50 cents, and each student should take a dairy paper, which will cost $1. Each student will need two white suits and caps for use in the dairy room. These can be purchased in Manhattan. Unnecessary breakage will be charged at cost. Board and rooms can be secured for $2.50 and upward per week, and laundry costs about 50 cents per week. Incidental expenses will be high or low, as the individual determines. The total of all expenses for the entire time — exclusive of railroad fare in coming and returning — need not exceed $40, and with close economy can be made less. Students in the dairy course cannot expect to earn any part of their expenses while at the College, as every hour will be needed for class work, practice work, or study.

Admission. Any person eighteen years of age or older, of good character, who wishes to study private dairying, and who has sufficient knowledge to understand the lectures and text-books used, is admitted without examination. An applicant should have a common-school education and should be able to handle readily problems in fractions, decimals, and percentage. Examinations will be held at intervals during the term. *Students not doing satisfactory work will be promptly dismissed.*

Equipment. A model private dairy, with the best forms of apparatus for handling and testing milk and making butter; a dairy herd of grade cows. During the dairy-school term this herd will be handled to show the effects of Kansas dairy feeds upon quality and quantity of milk and butter. Students in the dairy course have free use of the College library, containing 17,500 books, and in which are kept on file all the leading dairy and farm papers.

COURSE OF STUDY.

Principles of Agriculture. Treating of soils, crops, tillage, and manures; the selection, laying out, equipping and managing of Kansas dairy farms. Five hours per week. Professor Cottrell, Assistant Otis. Text-book, Voorhees' First Principles of Agriculture. Lectures.

Dairying. Milk — its secretion, nature and composition; causes and conditions influencing the quality and quantity of milk; handling of milk for the market and for butter-making, including milking, straining, aërating, cooling, preserving, and shipping; creaming of milk by gravity methods and by the separator; cream ripening and churning; washing, salting, working, packing and marketing butter. Three hours per week. Professor Cottrell, Assistant Otis. Text-book, Wing's Milk and its Products. Lectures.

Bacteriology. Relations of bacteria to methods of keeping milk; ripening cream and cheese; flavoring butter; diseases of milk; general health of man and animals; principles of disinfection. Two hours per week. Doctor Fischer. Text-book, Russel's Bacteriology. Lectures.

Feeds and Feeding. Properties of common feed stuffs; their effect on character and yield of milk and butter and their adaptability to Kansas conditions of dairying. The compounding of dairy rations to secure good yields at least cost with products having desired qualities. Three hours per week. Professor Cottrell, Assistant Burtis. Text-book, Henry's Feeds and Feeding. Careful study of the feeding of the College dairy herd will also be required.

Breeds and Breeding. Characteristics of leading breeds of cattle and their adaptability to Kansas dairy farming; dairy form and the selection of dairy animals; care and management of the dairy herd; principles of stock-breeding. Two hours per week. Professor Cottrell, Assistant Burtis. Lectures.

Diseases of Dairy Cattle. The common ailments of calves and dairy cows are discussed, and their causes and symptoms explained; remedies and preventives suggested; all from a practical farmer's standpoint. Two hours per week. Doctor Fischer. Lectures.

Butter-Making and Milk Testing. Practice is given in handling the creamer, running the hand separator, ripening and churning the cream, washing, salting, working, printing and packing butter; and care of dairy utensils and machines, carrying on all operations as they should be conducted to secure profitable returns on Kansas dairy farms. Analyzing by the Babcock method milk, cream, skim-milk, and buttermilk, with the object of learning how to avoid the large losses frequent on many dairy farms. Twenty hours per week. Professor Cottrell, Assistant Otis.

Bookkeeping and Commercial Law.

First year, fall term. Every effort is made to have these studies practical. Considerable time is given to those forms best adapted to farm and business life. Each student provides a full set of blanks, and keeps a regular set of books, in which accuracy in calculation and posting and neatness of execution are as essential as correct understanding of the principles.

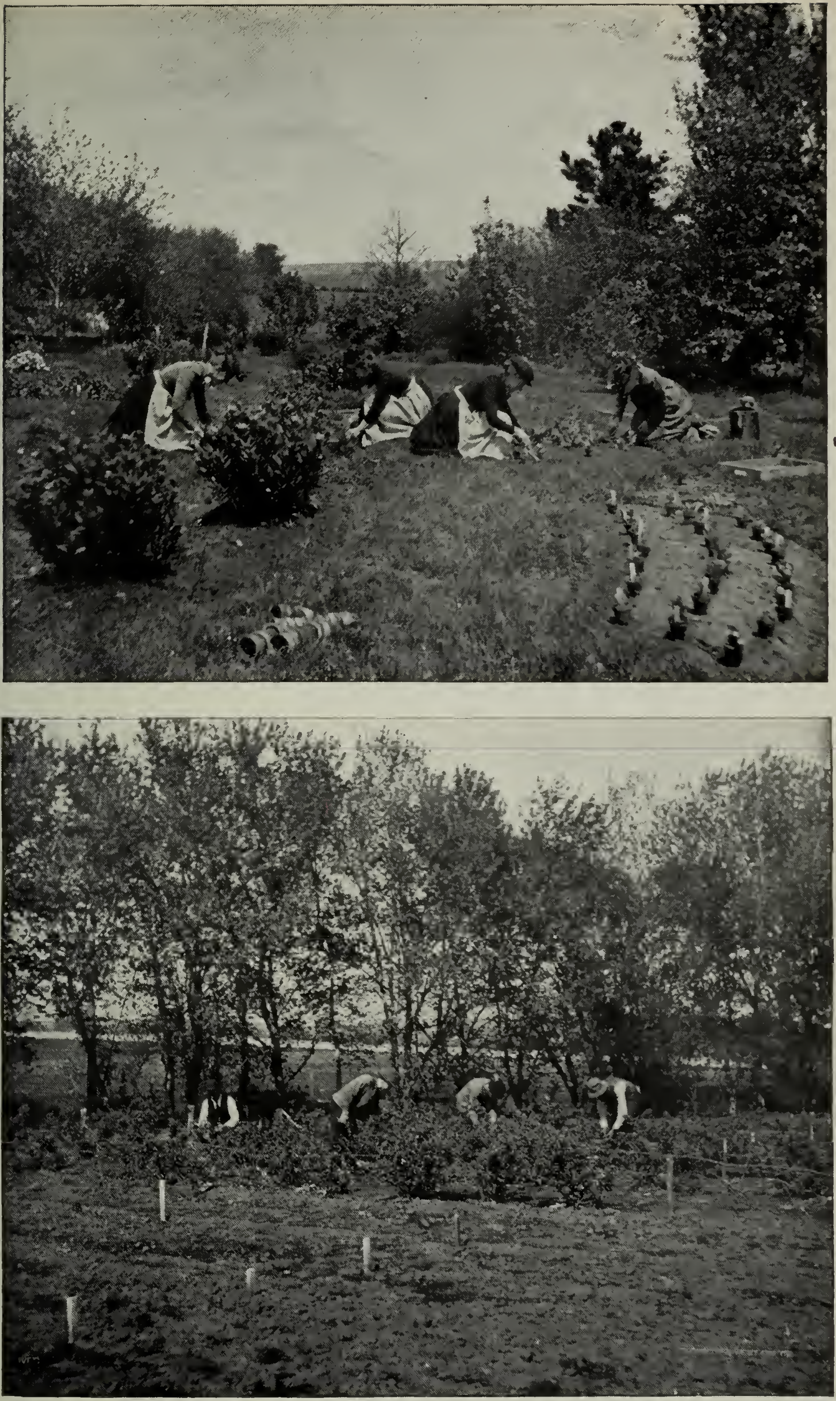
In connection with the work in bookkeeping, a practical course of twelve lectures in commercial law is given at the end of the term, which includes contracts, farm rights, negotiable paper, real estate, easements, partnership, sales, and business forms.

A text-book is used in connection with the bookkeeping work, while the commercial law is taught by lectures.

Botany.

1. *Elementary Botany.* Instruction in this is given in the spring term of the first year and the fall term of the second year, two days each week; and is the same for the general and agricultural courses. The classroom work is supplemented by daily field work, which in the main runs parallel with the text-book used. The aim in the field work is to teach the student how to observe, and how to draw conclusions from his observations. The following are a few of the subjects studied: Germination of corn, bean or other common seed; opening of buds; falling of leaves; various fruits and their adaptations for dissemination; pollination and adaptations for cross-fertilization. These notes and observations, together with the necessary drawings, are submitted from time to time for examination and criticism. In addition to this, each student prepares a herbarium of not less than fifty species of native plants. These are named by the aid of Gray's Manual of Botany, sixth edition, or by a key to the genera of Manhattan plants, prepared by the professor of botany. The students are required to provide themselves with pocket lenses, under the direction of the professor in charge.

HORTICULTURAL HALL AND GREENHOUSE.



STUDENTS AT WORK IN THE GARDENS.

2. *Agricultural Botany.* Second year, winter term. Two hours per week are devoted to this in the agricultural course. The subjects treated are those which have a direct bearing upon agriculture, such as grasses and forage plants, economic plants, weeds, etc.

3. *Cryptogamic Botany.* Third year, spring term, agricultural course. This will include a study of the common injurious fungi that affect cultivated plants. Two hours per week will be given to class work and five hours per week to laboratory work.

4. *Advanced Botany.* Third year, winter term, agricultural course; Fourth year, winter term, general course. The work is identical for these two classes. During this term the minute structure of plants is studied in the laboratory by the aid of the compound microscope. This includes an examination of the vegetable cell and of various tissues and tissue systems, and of the cell contents, such as protoplasm, chlorophyl, starch, crystals, etc. Each student has the use of a compound microscope, with the necessary tools and reagents. Instruction is given by lectures. Each student is required to prepare a herbarium of not less than twenty-five species of twigs. These are named by the aid of a pamphlet prepared by the professor of botany. A good herbarium and a large greenhouse are drawn upon for material for study.

EXTENDED COURSE. 5. *Morphology and Ecology.* Fall term. three days per week. The former includes a study of the organs of plants, their modifications to perform various functions, and a comparison of these organs in plants of various degrees of development. The latter is that part of vegetable physiology which treats of plants as organisms, and would include such topics as germination, pollination. insectivorous plants, symbiosis, and adaptation to climate. The second half of the term will be devoted to the subject of ecological plant geography, which will include a study of plant communities as a result of adaptation to environment.

6. *Systematic Botany.* Spring term, three days per week. A study is made of the natural orders of phenogamous plants. their characters and relationships.

7. *Vegetable Physiology.* Fall term, two days per week. This deals with the chemical and physical problems presented in living plants, such as the absorption of food, elaboration of organic material, transfer of food, action of light. This course should be preceded by the required physics, the advanced inorganic chemistry of the fall term, and the required fourth-year botany. In the spring term a course of experimental physiology will be offered, consisting of laboratory experiments illustrating the preceding course.

8. *Cryptogamic Botany.* Winter term. During this term the principal types of fungi, algæ, mosses and ferns are studied. This course should be preceded by the required botany of the fourth year and the first term of the advanced zoölogy.

9. *Economic Botany.* Spring term, two days per week. A study of the economic products of the vegetable kingdom, their origin, history, and uses. This should be preceded by forestry and systematic botany. Those who do not wish mention of special proficiency in botany may be admitted to the courses without the requirements in chemistry, physics, zoölogy, and horticulture.

Means of Illustration. A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the state; a twig herbarium, illustrating woody plants in their winter condition; and a seed herbarium, containing a representative collection of seeds and fruits — altogether the herbarium contains about 60,000 specimens; also twenty-eight compound microscopes, four dissecting microscopes, tools, reagents, etc. The department is provided with a zinc culture room, and the ordinary apparatus for bacteriological work; a dark room and apparatus for photography; microtomes and other apparatus for microtomic work; about 150 charts, illustrating all departments of botany; a botanical library of over 1000 bound volumes and numerous pamphlets.

Chemistry.

COURSES IN PURE CHEMISTRY.

1. *General Introduction.* This course, given regularly every fall term (and repeated in the winter term), consists of about fifty lectures and experimental demonstrations, supplemented by both oral and written recitations. After a few weeks the periodic system of the elements is made the basis of chemical classification. Special attention is given to the non-metals and the general foundations of chemical science.

2. *Chemistry of the Metals.* This course immediately follows course 1, and is taken twice a week. It not only serves to elucidate chemical principles, but it is the basis of instruction in metallurgical processes and industrial applications of the metals.

3. *Elementary Laboratory Work.* A course of laboratory work one afternoon per week (two consecutive hours) is required of all students pursuing the study of the elementary inorganic chemistry.

4. *Advanced Inorganic Chemistry.* In the spring term, lectures and laboratory work in this subject will be offered as an elective to

third-year students and postgraduates. The course will include assigned reading of a text-book in inorganic chemistry. Prerequisites: All the preceding courses.

5. *Introduction to Organic Chemistry.* This course is given regularly three times weekly in the winter term, and repeated in the spring term. Especial emphasis is given to the fatty compounds and the study of general reactions, as a separate elective course on aromatic compounds follows. Prerequisite: Course 1.

6. *Aromatic Compounds.* This course (offered in the fall term) is supplementary to the preceding and is an elective for third-years and postgraduates. Prerequisite: Course 5.

7. *Historical and Theoretical Chemistry.* This course (offered in any term when three or more students apply for it) will be adapted to the convenience of instructor and students concerned. Prerequisites: All the preceding courses, also 11 and 16.

8. *Advanced Laboratory Work in Pure Chemistry.* Advanced laboratory courses, supplementary to the advanced classroom work, will be offered in any term to properly qualified students. Students undertaking this line of work must spend at least twenty or thirty hours of work under the direction of the professor in charge in order to receive credit.

COURSES IN ANALYTICAL AND APPLIED CHEMISTRY.

11. *Analytical Chemistry.* This course is designed not only to impart the principles and practices of qualitative chemical analysis, but to give opportunity for extending the student's knowledge of inorganic chemistry. It regularly follows course 2, but may be taken at the same time with that course, and requires two hours per week.

12. *Laboratory Work in Analytical Chemistry.* This course must be taken with course 11, and occupies eight hours per week. The exercises are so arranged as to pass from the simple to the more difficult, and at the same time to facilitate comparative study of the various basic and acid radicals. Opportunity is afforded for advanced work to such students as desire it.

13. *Agricultural Chemistry.* In the fall term of the third year a series of lectures is given on the formation and characteristics of different types of soil, the soil requirements of a variety of crops, the modes of soil enrichment and amelioration, and the general relation of crops to earth, air, and water. These lectures are illustrated by experiments. Courses 5 and 11 must precede this course.

14. *Chemistry of Foods.* This course is given by lectures during the first half of the winter term, and embodies a presentation of the chemical composition of foods, the changes which they undergo in

cooking and digestion, and their adaptation to the various needs of the animal body. Course 5 must be finished before undertaking this course.

15. *Advanced Chemistry of Foods.* This course may be taken by advanced or postgraduate students. It consists in study of the literature treating of food and nutrition from a chemical standpoint, and is accompanied by laboratory work. The latter feature may be enlarged to almost any extent that the student may desire. The higher lines of work in this course require some previous training in quantitative analysis.

16. *Quantitative Analysis.* May be taken up at any time after the completion of courses 11 and 12. After the necessary preliminary training, the student may give special attention to any line of quantitative analysis, such as that of foods and fodders, soils and fertilizers, ores, water, gases, etc. The investigation of special chemical questions is encouraged.

Means of Illustration. Laboratory tables, with all the necessary equipment for eighty students in qualitative analysis and eight in quantitative analysis; facilities for assaying; illustrative apparatus, both general and special; a well-selected mineralogical collection, representing all but the rarest species, in various forms, colors, and structures; a good collection of rocks; a set of the Stassfurt minerals, and the fertilizers prepared from them.

Geology and Mineralogy.

1. *Dynamic Geology.* This course is given regularly either in the winter or spring term to third-year students (acording to course of study). As the name implies, special attention will be given to the physical and chemical aspects of geological study, rather than to the biological and historical sides of the subject. The aim will be to teach the students something of the relations of geology to other sciences and of the importance and scope of geology, rather than to enter into the details and technicalities of geology. Especial emphasis will be given to the relation between this science and physical geography.

2. *Crystallography.* An elective course in crystallography is offered by the professor of pure chemistry whenever a sufficient number of students of the higher college classes apply for it.

3. *Blowpipe Analysis and Determinative Mineralogy.* An elective course offered by the professor of applied chemistry. Prerequisite: Chemistry 11.

Drawing, Descriptive Geometry, and Architecture.

1. *Free-hand Drawing.* The course in free-hand drawing comprises two or three terms of work in surface designing and ten lessons in sketching from the object. The surface designing is taught in the first year. The student begins with forms involving the straight line and the arc. He is led to note the effect of geometrical arrangement, repetition, alternation, symmetry, proportion, harmony, and contrast. Later, the conventional ornament is taken up, and more subtle curvatures and complex forms are introduced. Toward the close of the term, natural forms and historic ornament in the flat are studied.

2. *Sketching.* The work in sketching is connected with the study of linear perspective in the spring term of the third year. The models used are geometrical solids and objects of utility and beauty, whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow and reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish.

3. *Geometrical Drawing.* All first-year students are given one-half term's work in geometrical drawing. This work comprises the construction of perpendiculars, parallels, angles, and polygons; the circle and its secant lines; the ovoid, the oval, and the spiral; various geometrical designs and elementary architectural forms; the use of drawing-board and **T** square; and the conventional representation of building materials.

4. *Orthographic Projection.* The engineering students of the second year are given three full terms of orthographic projection, comprising the projection, section, development, interpenetration, shade and shadow of the Euclidian solid. Instruction is also given in the manipulations of the blue- and black-printing processes, and in drafting from the model — a complete eight-horse-power engine. Accuracy of measurement and neatness of execution are required in all work. The third-year students of the general course are given two half terms of projection drawing. The character of this work is the same as that of the corresponding term of the engineering course.

5. *Axonometric Projection.* In the third year of the engineering course axonometric projection is taken up. The study comprises a complete exposition of the various systems of representing forms of three dimensions. The practical advantages of each are pointed out by illustrative problems, especially with regard to isometric projection, a system of graphic representation which is gradually forcing its way

into the workshop. Various exercises in line and brush shading are connected with this work.

6. *Descriptive Geometry.* This study forms the graphic work of the winter term of the third year in the engineering course. It comprises the usual problems on the straight line, circle, rotation, collineation, and surfaces of revolution. Several weeks are given to the study of warped surfaces, their sections, intersections, and relations.

7. *Linear Perspective.* This study is taught on mathematical bases, and is intended to furnish the scientific answers for the questions which constantly confront the student of drawing from the object. It comprises the subjects of vanishing points, vanishing traces, measuring points, cylindric perspective and perspective corrections, shades and shadows in perspective.

8. *Architectural Course.* The courses of study for all engineering branches must necessarily be the same with regard to all work of a preparatory or general character, but differ with regard to the professional branches. Students who intend to take architecture in place of mechanical engineering may make substitutions for work, as stated on page 40. The department of industrial art is well equipped to teach the branches named. It owns a rapidly growing collection of illustrative building material, complete sets of drawings and blue prints of most of the Kansas state buildings, a photographic camera, a dark room equipped with running water and ruby light, etc. The substantial buildings of the institution and its complete system of heating and lighting furnish additional illustrative material. Students who intend to take this course should study landscape-gardening with the department of horticulture.

9. *Home Architecture.* Third year, fall term. The students in the course in household economics will be given a course of lectures on practical home building, and will be required to design and draw a set of plans, elevations and details of a small residence, with modern provisions for heating, ventilation, and drainage.

NOTE.—The College furnishes drawing-board, T square, triangles and water-colors for the graphic work done at the College, but all tools for home use, including drawing-board, T square triangles, compasses, and protractor, must be furnished by the student.

Means of Illustration. Models, plaster casts, patterns, charts, collection of ornamental tiles, marbles, and terra-cotta forms. One of the classrooms is provided with top light, and furnished with twenty-five Dietzgen drawing-tables.

Economic Science.

The work in economic science occupies four terms, as follows:

1. *Elementary Economics.* Fall term, first year, two hours a week. Lectures introductory to the study of industrial questions.

2. *Principles of Economics.* Fall term, third year. Introduction to the general subject, with elaboration of certain aspects. Pains are taken to compare conflicting views and point out sources of information on all sides of vexed questions. Lectures and library reading. Each student keeps a note-book and reading record.

3. *Economic and Social Problems.* Winter term, fourth year. In this course attention is given to the questions of land, labor, capital, competition, poverty, wealth, etc.; to proposed palliative measures; and to the single-tax, anarchism, and socialism. Lectures, theses, and reading.

4. *Finance.* Spring term, fourth year. This course includes the historical and theoretical study of money and other media of exchange; of banking, taxation, tariffs, and public debts.

EXTENDED COURSE. A full elective course will be given through the year for those who have already taken work in political economy. It will consist, in part, of study throughout the year of the recent economic theories underlying industrial and financial problems; and in part of special investigations and reports, from members of the class, of problems specially pertinent to Kansas and adjoining states. Courses will be offered as follows:

5. Fall term. The telegraph, railroads and city monopolies will be studied.

6. Winter term. Farm mortgages, prices, and other agricultural problems.

7. Spring term. Life and fire insurance, building and loan associations, and other problems of coöperation and saving.

In all the above courses the attempt is made to enable the student to handle the literature of the science, to examine the subject in hand from different points of view, and to form intelligent judgments regarding economic questions. The work of the two departments of history and political science and of economic science is closely correlated.

English Language and Literature.

1. *Analysis.* Fall term, first year. This includes the origin and growth of the language, the history of its grammatical forms, the analysis of sentence making, and the discussion of idioms and difficult constructions, together with such contraction, transposition and transformation of sentences as will aid in securing variety of expression.

2. *Composition.* Winter term, first year. One term is given to the study and practice of composition, including the elements of rhetoric.

3. *Structure.* Spring term, first year. One term's work is given to careful study of words and their elements — roots, prefixes, and suffixes. The most fruitful primitives from Saxon, Latin and Greek are learned, and also the laws governing the formation of derivatives. Attention is given to the history and changes of words, and daily exercises teach careful discrimination in their use.

4. *Theme Writing.* Fall term, second year. This will consist of daily exercises in deducing, outlining and writing out themes, from all kinds of subjects, the object being to teach the logical development of composition subjects and to drill into habits of accurate and easy writing in the various forms of discourse. Both classroom and home work will be required, and all work will be under the immediate direction of the professor in charge.

5. *Rhetoric.* Fall term, third year. This is the study of higher rhetoric, including discussions of the fundamental processes of composition and the essential elements of the different forms of discourse. Selections from good authors are studied for the application of principles and the outlines of criticism.

6. *General Literature.* Winter term, fourth year. This includes the history and development of English literature, with illustrations from the best authors. Students are led to appreciate the power of our mother tongue, and at the same time gain some acquaintance with the best thought of the world.

7. *Nineteenth Century Literature.* Spring term, fourth year. This consists of a study of modern English and American literature. Laboratory methods will be used in the study of representative authors, together with the reading and discussion of standard works.

German.

Optional. Two years of work are offered. The object is to enable the student to read German literature as he would read English. With this end in view he begins not with the grammar but with a text provided with a strictly literal translation; and, aided by his teacher, reads German as German daily throughout the course; to test the accuracy of his knowledge, he also prepares written verbatim translations of the text. Such grammar as is requisite to a reading knowledge of the language is learned principally as one learns the fundamentals of the grammar of his mother tongue, viz., by observation and use. The notion that a foreign language to be understood must be translated by the student is combated from the beginning. Fischel's German Reader forms the basis of the first year's work. This is followed by more difficult matter.

DRAFTING ROOM.

History and Political Science.

1. *United States History.* An elementary training in United States history is required for entrance. In the spring term of the second year the constitution and political history of the nation is studied.

2. *General History.* Winter term, second year. The objects of the course are to fix in the mind the main facts of history; study their meanings, relations, laws, and lessons; train the memory, reason, imagination, and sympathies; help the student to understand references in current literature; comprehend the origin and development of existing states, peoples, and institutions; and by the light of the past learn something of the future — what it may be and what it should be — the when, the why, the ought, and the how. The work consists of lectures, text-book study, reference reading, analyses, discussions, solution of problems, and original research and generalization.

3. *Nineteenth Century History.* Spring term, third year. In this course the chief nations of the world, the leading events and great movements of this richest of all the centuries, are studied more fully than is possible in the preceding course. The methods employed are similar to those just named under general history; but still more attention is given to the philosophy of history and its ethical aspects, the drift of our time, and the possibilities of the future; and a wider use of the library is substituted for text-book study — reference reading in such books as Buckle's History of Civilization in England, Carlyle's French Revolution, Sloan's Napoleon, the works of Green, Guizot, McMaster, Mackenzie, etc., being required. An effort is also made to create a strong interest in the lives of Lincoln, Gladstone, Bismarck, Garibaldi, and other great men; in the works of Darwin, Spencer, Laplace, and other scientists and philosophers; and in the writings of Lowell, Emerson, Hugo, Ruskin, Tennyson, Mazzini, Goethe, Tolstoi, Sienkiewicz, etc.— an interest that may lead the students to do much valuable reading in history, biography, science, philosophy, and general literature; one of the main ideas of the work being that if a youth be given an appetite for knowledge and trained a little in methods of acquiring it he will make the world his university and every library his text-book.

4. *Civics.* Winter term, third year. The science of citizenship; law and government, municipal, state, and national; their origin and development; what they are now and what they ought to be. Lectures, with text-book work, analyses, and discussions. The students choose selectmen, governor, supreme court, etc., hold town meetings,

organize as a state house of representatives, and afterwards as a national house of representatives; bills for better roads, proportional representation, income tax, electric ballot, initiative and other live issues are introduced, discussed, and acted on as in Topeka and Washington; the constitutionality of enactments is tried before the supreme court; parliamentary usage is followed as far as practicable.

Horticulture and Entomology.

All horticultural subjects are treated chiefly by lectures, supplemented by references to standard works. Essays are prepared by students on the various topics considered throughout the course. The laboratory and industrial work pursued during the entire course combine theory with practice.

1. *Horticulture.* Second year, winter term, agricultural and household economics courses. The botany previously required, together with industrials taken by young men in orchards, nursery, and greenhouses, fit the student for the study of the general principles underlying a systematic study of plant growth, propagation, environment, and improvement; involving a study of seeding, cutting, budding, grafting, layering, etc.; the management and location of nurseries; and the training, selection, packing and shipping of stock; their special treatment being illustrated by field study.

2. *Vegetable Gardening and Small Fruit Culture.* Third year, fall term, agriculture and household economics courses. The first half of the term is devoted to vegetable growing. Subjects treated include the raising of vegetables for home and for market; with location, soils, manures, tools, irrigation, etc., best suited for crops grown in kitchen and market gardens; the construction and manipulation of hotbeds, cold-frames, and winter gardens; the growing of early and late crops, their special treatment, methods of cultivation, planting, transplanting, harvesting, and marketing; a study of varieties suitable to local conditions; and the origin, nature and methods of improvement of vegetables. The treatment of the above subjects is supplemented by field work in the gardens. Small-fruit culture occupies the second half of the fall term. The subject is treated in much the same manner as vegetable gardening, in reference to small fruits for the home and market, taking up the cultivation of small fruits, and improvements and methods employed in propagation.

3. *Pomology.* Fourth year, fall term. The course embraces a study of the origin, culture, identification and classification of orchard fruits. The student becomes familiar with orchard fruits through field work, and by the aid of fruit models in the horticultural museum.

4. *Horticulture.* Fourth year, winter term. The greater portion of the term is devoted to a practical treatment of orchard work; location, soil, planting, pruning, cultivation and fertility of the orchard; a study of the value of windbreaks, how best made, trees suited for same in Kansas; reasons for horticultural operations and methods employed in producing variation and improvement of domesticated plants; the picking, grading, packing, storing, shipping and marketing of fruit crops; list of varieties of fruits suitable for Kansas orchards; spraying of plants for fungous diseases and insect pests, with practical demonstrations; viticulture, the adaptation and growing of grapes in the West, a study of distinctive characteristics of varieties, their value for home and market use; a general treatment of landscape gardening, location and construction of walks and drives; planting and grouping of ornamental plants in beautifying the home and park grounds, involving a study of trees and shrubs suited to Kansas conditions, students familiarizing themselves with trees and shrubs in the arboretum and on College grounds.

5. *Forestry.* Fourth year, spring term. In this course are considered the past and present influence of forests on the climate and conditions of countries; the planting, management and preservation of forest tracts; a study of native and introduced species of trees of value for forest plantations and shelter belts; the growing and handling of seedlings for forest planting on a commercial plan. The work is greatly assisted by object lessons from the government forestry substation located on the College grounds. Text-book, Hough's Forestry, supplemented by lectures.

6. *Floriculture.* Third year, winter term, household economics course. Lectures in the classroom are supplemented by practical exercises in the greenhouses and gardens, treating of the propagation and culture of flowers, including the treatment of seeds, cuttings, mixing of soils, potting, repotting, watering, cut flowers, packing, and the many operations that attend amateur and commercial flower gardening.

7. *Ornamental Gardening.* Third year, spring term. Among the subjects treated are: Methods employed in laying out of private and public grounds; construction of lawns, walks, and drives; the planting and training of ornamental trees, shrubs and flowers used in beautifying the landscape; and the management of portico, window and roof gardening. Lectures, assisted by stereopticon views and by field work in the arboretum.

8. *Entomology.* Second year, spring term. The course is divided into three divisions — classroom, laboratory and field instruction. The general principles of insect life and classification are first studied.

The subject is treated from an economic standpoint in the relation of the science to agriculture and horticulture. Instruction in classroom is rendered effective by use of specimen cases and a series of charts in discussing the groups of beneficial and injurious insects, insecticides, and methods of combating. Laboratory work is given special attention, aided by insectary and insect collection. Lenses used in botany are required to carry on this work. Each student makes a collection of different species in connection with his field work. Smith's Economic Entomology is the text-book used, supplemented by lectures. In the short time allotted to this branch in the regular course, it is impossible to do much work in advanced classification. Students are, however, given a good basis for more advanced work, which may be elected during their course or taken up as postgraduate work.

Industrial Work. In this work students are given practical instruction in the planting and arrangement of nursery stock, digging and planting of trees, pruning and training of trees and vines, transplanting and management of small fruits, use of hotbeds and cold-frames, and general vegetable gardening. Special students during the winter term receive more advanced instruction in the various methods of propagation, in grafting room and greenhouses. Students who show special proficiency in horticulture are often employed as foremen. An industrial course in floriculture is open to young women.

Means of Illustration. Orchards containing 100 varieties of apples, 50 of peaches, 10 of pears, 30 of plums, 40 of cherries, and 15 of apricots.

Small-fruit garden, with 200 varieties of small fruits, including blackberries, raspberries, gooseberries, currants, and strawberries; and vineyard, with 175 varieties of grapes.

Forest plantation of 12 acres, containing 20 varieties, of from 1 to 25 years' growth.

Ornamental grounds set with a variety of evergreens and deciduous trees. Sample rows, containing about 150 varieties of ornamental and useful shrubs and trees, labeled.

Vegetable garden with hotbeds and cold-frames, and experimental beds. Practice rows for students' budding, grafting, cultivating, and pruning.

A well-planned and furnished greenhouse of three rooms, stocked with a fine collection of native and exotic plants; three propagating pits, 12x70 feet, for experimental work, and three others of the same size with commodious workroom adjoining, and equipped with the best improvements for the use of the young women in the practice of floriculture.

A tool room containing 50 individual cases of horticultural tools, besides tools and implements for general use, and pumps and apparatus for spraying with fungicides and insecticides.

Museum, containing a collection of woods from American forests, seeds of many varieties of vegetables, a herbarium of cultivated grapes, and models of leading orchard fruits and vegetables.

Household Economics,

INCLUDING HYGIENE AND SEWING.

The above heading stands for far more than the old one of "Household Economy," both natural science and sociology in their increasing application to the business of every-day life compelling a term that shall include both. To perpetuate the home; to reduce poverty, pauperism, and crime; to give comfortable and happy family life to all faithful workers, and so strengthen the state's quota of true citizens, well taught and well nourished — this is the sum of household economics; and both natural science and sociology are showing the necessities involved. The essentials of such a course fall under the following heads:

1. How to choose healthful locations, and plan convenient, suitably furnished houses.
2. How to ventilate, warm and light in the best manner both public and private buildings.
3. How to provide not only attractive, appetizing food, but that suited to the age and occupation of the eater.
4. How to judge clothing materials and all fabrics for household use, and prepare them in the best manner.
5. How to guard the water-supply, preserving it from taint or infection, and providing a supply suitable for drinking and washing.
6. How to care for milk in the best manner, keeping it free from germs.
7. How to insure rapid and sanitary drainage, and the prompt removal of garbage.

Hygiene is thus seen to be an essential part of the teaching, and some knowledge of chemistry is required by every student entering the course.

1. *Hygiene.* First year, winter term. A course of lectures in elementary hygiene, two hours a week, is given to both young men and young women, in which are explained those general principles of wholesome living which every one should know.

2. *Household Economics.* Second year, winter term. Simple lessons with experiments on chemistry of foods: (*a*) water foods, (*b*) milk, (*c*) albumen, (*d*) fats, (*e*) sugar, (*f*) starch, rice, etc., (*g*)

cellulose. Simple dishes are given under each heading, each member of the class doing individual work. Tables of the form used in industrial teaching at Pratt and other industrial-training schools have been provided and fitted up for individual work, each student being required to work out a rule singly. Fruit canning, preserving, pickling, etc., is part of the work of this term for more advanced students. Bacteriology in its simplest forms is taught, together with the uses and values of the various cleaning agents, sapolio, pearline, borax, ammonia, etc. At each lesson two housekeepers are appointed, who have general oversight of the room.

3. *Household Economics.* Third year, spring term. The same general rules for class are observed. Review work of previous term is given, and, with each new food material used, attention is called to its composition. Prices and how different foods should be purchased are also taught, and the law of harmony in mixing and combining food. The practice work of this term consists in cooking meats and fish, simple sauces and gravies, and plain desserts. Short papers are required on tea, coffee, spices, gelatine, etc., their history and use, with review each month of the month's work. Marketing is also taught, diagrams are used, and the class learn different parts of the animal and the best cuts for roasts, soups, stews, etc., with the various methods of cooking.

4. *Household Economics.* Fourth year, fall term. The work of the previous terms is reviewed. The chemistry of yeast and baking-powder is taught. Some simple lessons in invalid cookery are given, and, in connection with this, one or two in the making of flaxseed and other poultices, etc. Doughs and batters are taught in their simpler forms, ending with the first work in bread. In all classes, practice is given in waiting on table and serving in the best manner. The opening in January, 1898, of the college lunch room and kitchen affords an unusual opportunity to advanced students of seeing and aiding in the preparation of food in large quantities, as well as of studying student dietaries as made for the Boston Institute of Technology and adopted by the University of Chicago; with the cost and general care of materials.

One year of industrial work in cooking is required in the household economics course, one term, at least, of which must come in the second year.

5. *Sewing. Industrial Work.* The course of work has been carefully graded, with the idea of developing habits of accuracy and self-reliance. Each pupil is required to keep a note-book, in which she records a description of the work accomplished. A written examination is held at the end of each term. During the first term the

pupil makes a book of models, covering the full course in hand sewing, and consisting of basting, hemming, gathering, darning, patching, etc. Second term: Machine practice, drafting, cutting and making underskirt and drawers. Third term: Drafting, fitting and making dress without lining. Fourth term: Cutting and making corset cover; drafting and making night-dress. After completion of fourth term, pupils who desire to take more advanced work are taught to adapt and use patterns taken from pattern sheets; also the use of a dress-cutting system, and to make a woolen dress. The first term the materials are furnished by the College; after that the pupil furnishes her own materials and makes the garments for herself.

Students in the household economics course take sewing as an industrial throughout the first year.

6. *Dressmaking.* Second year, winter term. Two hours per week. Drafting, cutting and fitting skirt and waist pattern. Use of pattern sheets.

Means of Illustration. Kitchen laboratory, with ranges, cooking utensils, dining-room furnishings, dairy furniture.

Sewing rooms, with eight machines, models, patterns, and cases.

Mathematics.

It is the aim of the department of mathematics to give a thorough training in a small number of subjects, and to develop in the student the ability to attack new problems, rather than to burden his mind with a large number of facts or special methods. It is also characteristic of the methods of the department that an attempt is made to give to the mathematical subjects a touch of human interest, by directing the attention of the student to the historical development of these subjects. For example, the course in plane geometry is opened by a lecture on the history of geometry. The following courses in mathematics will be given next year:

Courses 1 to 3, *Elementary Algebra.* Text-book, Wells's Higher Algebra.

1. Required of all students in fall term of first year. This course includes the fundamental operations, factoring, highest common factor, least common multiple, fractions, and simple equations with one unknown quantity, both integral and fractional. Special attention is paid to the acquirement of a thorough understanding of the principles of factoring, and of skill in the application of these principles.

2*a*. Required of students in agricultural course, winter term, first year. This is a short course, following course 1, and including the essentials of simple equations with two or more unknown quantities, involution, evolution, fractional and negative exponents, radicals, quadratic equations, ratio, and proportion.

2*b*. Required in general and engineering courses, winter term, first year. This course covers more thoroughly the following subjects: Simple equations with more than one unknown quantity, involution, evolution, fractional and negative exponents, radicals, and quadratic equations with one unknown quantity.

3. Required in general and engineering courses, spring term, second year. Quadratic equations completed, ratio and proportion, arithmetical and geometrical progression, logarithms, the binomial theorem.

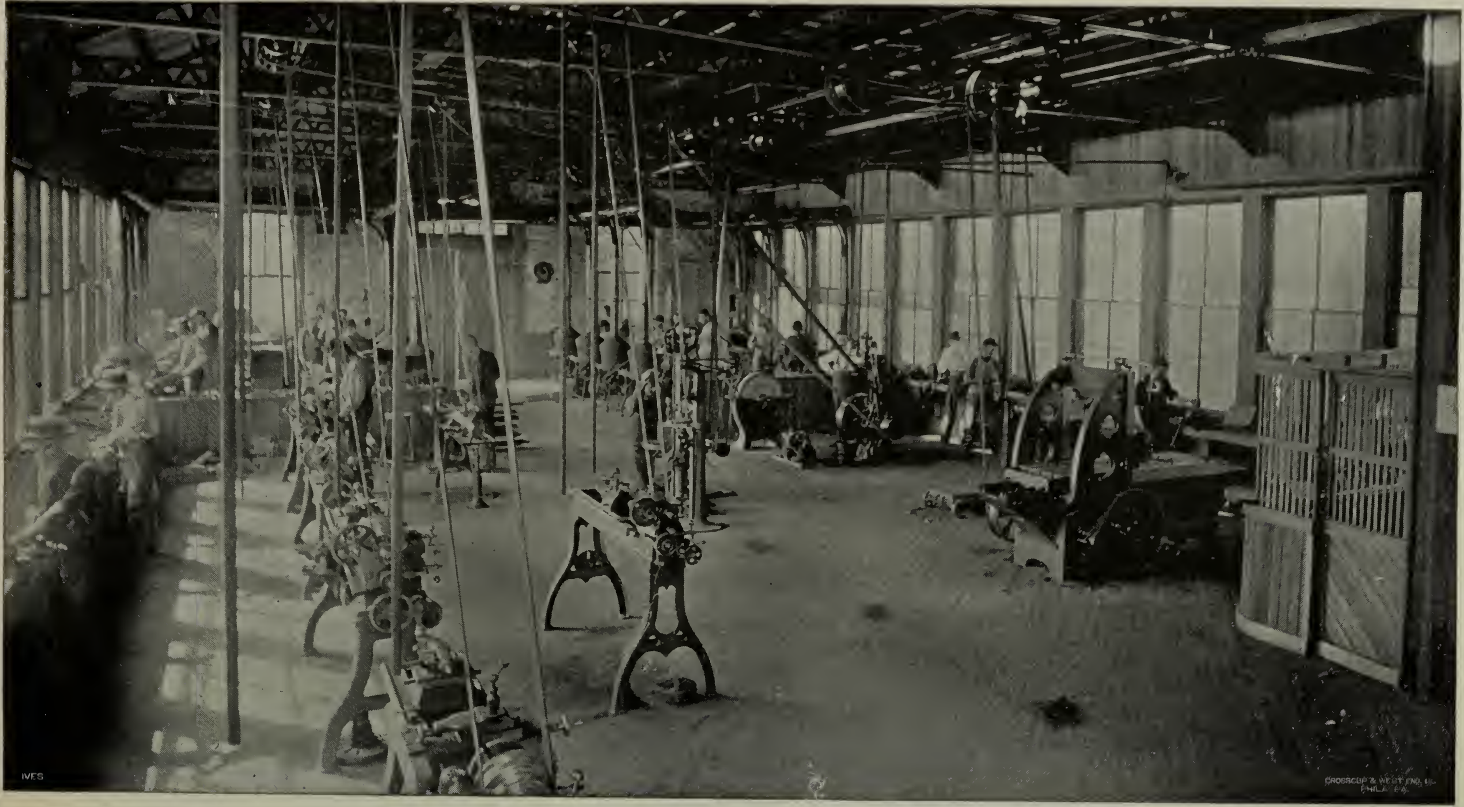
4 and 5. *Geometry.* Text-book, Phillips and Fisher's Elements of Geometry. 4. Required in all courses. In engineering and agricultural courses, spring term, first year; in general course, fall term, second year. First three books of plane geometry. Numerous exercises are assigned for original demonstration and construction by the student. 5. Required in all courses. In engineering and agricultural courses, fall term, second year; in general course, winter term, second year. About one-third of the term is given to the completion of plane geometry, the remainder to solid geometry.

6 and 7. *Trigonometry.* 6. Required of students in general course, fall term, third year. In this course special attention is paid to the applications, both in surveying and navigation. As a practical application of the uses of trigonometry, a course of twelve lessons in surveying is given, in which the student is taught the use of the surveyor's compass, transit, Y level, plane table, and other instruments, with which the department is well supplied. 7. This course differs from the preceding in that less attention is paid to the applications and more to the attainment of skill in handling trigonometric functions and in logarithmic computation. A few lessons are also devoted to spherical trigonometry.

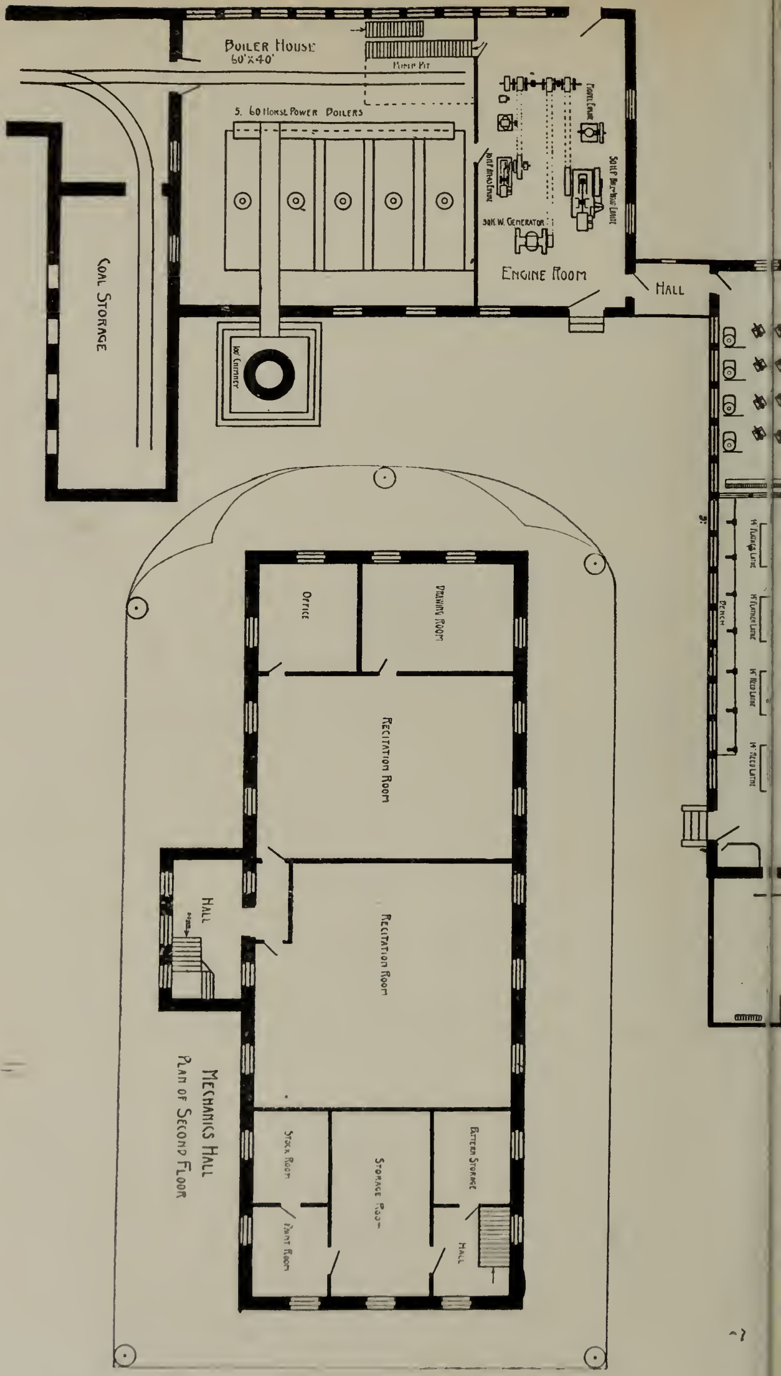
8. *Analytical Geometry.* Required of students in engineering course, spring term, third year; elective in general course. Rectangular and polar coördinates, the straight line and circle, other conic sections, the general equation of the second degree.

9. *Differential and Integral Calculus.* Required of third-year students in engineering course. This course consists of three lectures a week throughout the fall and winter terms, and two lectures a week in the spring term.

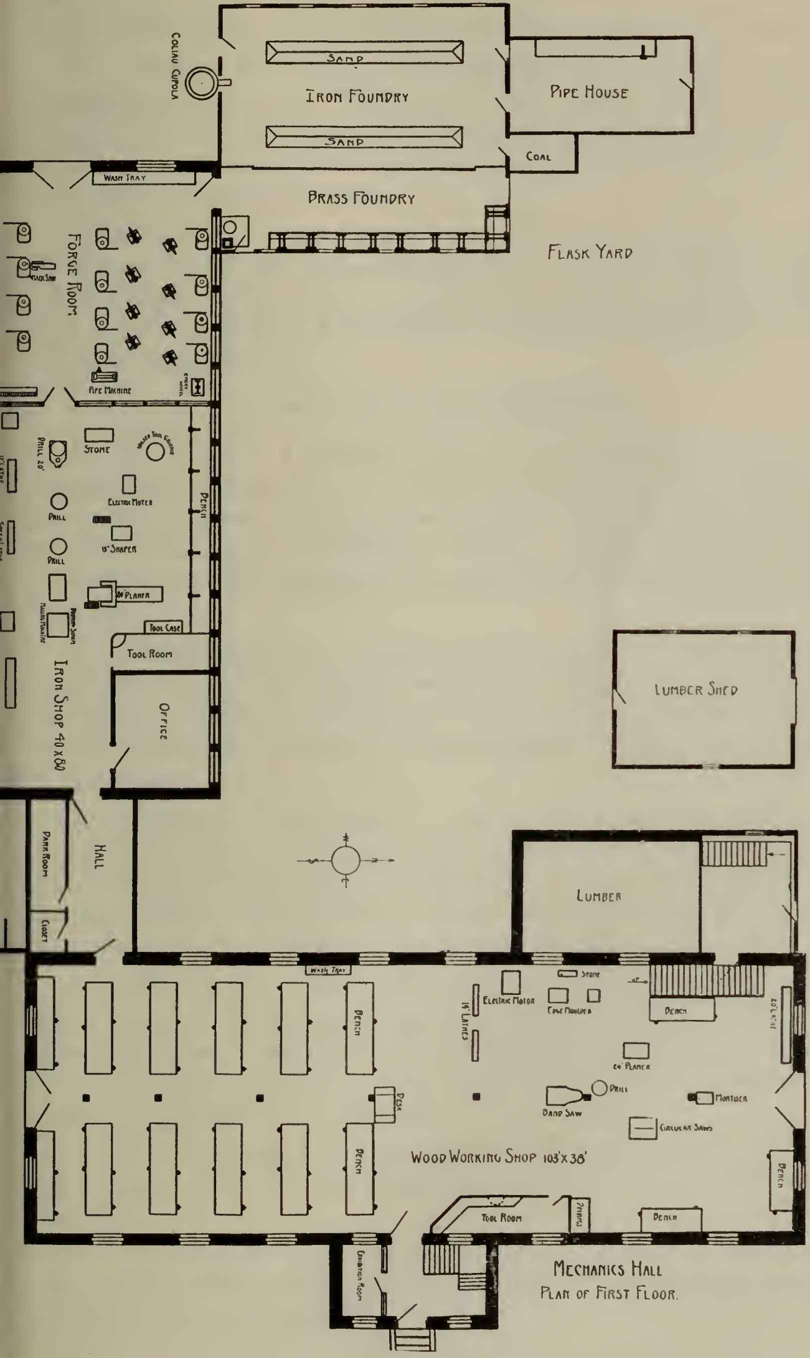
10. *Higher Algebra.* For students in the extended course and postgraduate students. This course will consist of two lectures a week during the fall and winter terms, and three lectures a week in the spring term. Permutations and combinations, theory of equations



MACHINE-SHOP.


Boiler House
60'x40'
Pump Pit
5. 60 Horse Power Boilers
Coal Storage
100' Chimney
Engine Room
30 K.W. Generator
Hall
Bench
Office
Drawing Room
Recitation Room
Recitation Room
Hall
Stock Room
Paint Room
Storage Room
Battery Storage
Hall
Mechanics Hall
Plan of Second Floor

G SHOPS AND POWER-HOUSE.



and determinants will be some of the subjects treated. The principal part of the course will be given in lectures by the instructors, but occasionally topics will be assigned for presentation by the students.

11. *Modern Geometry.* For students in the extended course and postgraduate students. This course will consist of two lectures a week in the fall and winter terms and three in the spring term. It is thus an exact counterpart of course 10, and it is planned to give these two courses in alternate years.

All the above courses, except course 11, have been given in a more or less modified form during the past year. Courses in other branches of the higher mathematics—in advanced integral calculus, differential equations, theory of functions or elliptic functions may be arranged if desired.

Mechanics and Engineering.

1. *Woodwork.* A definite, graded series of tasks is given in joining, work to dimensions, and simple problems in construction, with the proper use and care of common bench tools, through which each student is advanced according to ability. Practice is given later in general woodwork, carpentry, cabinet-making, turning, and pattern-making.

2. *Blacksmithing.* A similar graded series of tasks in blacksmithing teaches the management of the forge, hammer, and anvil, and gives practice in welding, drawing out, forming, etc. Advanced work includes the working of various grades of steel, tempering, and tool dressing.

3. *Foundry.* The foundry work consists of floor and bench molding for iron and brass. Such castings as are used in the machine-shop and about the institution are made in the foundry. The work includes molding from a variety of patterns, and preparing for and running a heat of from 1500 to 2000 pounds.

4. *Metal Work.* The work includes bench and machine work in great variety. Chipping, filing, scraping and laying out work from drawings precede machine work, in which are used drill-presses, lathes, planer, shaper, milling machine, and cutter-grinder. General machine-shop practice is furnished.

5. *The Industrial Work* of the fall term, second year, is doubled in quantity, and includes lectures on machine-shop tools, their use and care.

6. *The Industrial Work* of the winter term, third year, is doubled in quantity, and includes lectures on machine-shop methods of production, cost of work, etc.

7. *Elementary Analytical Mechanics*, twice a week for two terms, precedes a study of physics. The laws of motion and force are studied.

8. *Hydraulics*. Hydromechanics twice a week, includes problems in flotation, flow from orifices and pipes, weirs and jets, and the application of hydraulic formulæ to practical problems.

9. *Mechanics Applied* to simple farm machinery. A short course showing the application of elementary mechanical principles to farm machinery, and consisting of illustrations and problems, is given to students in the agricultural course.

10. *Machine Design*. This consists largely of drawing-board work, where the principles of drawing and applied mechanics are brought together in the solution and representation of problems concerning the elementary details of machinery, such as fastenings, gearing, belting, cams, etc.

11. *Principles of Mechanism*. This accompanies the work in machine design, and treats of the principles which underlie the various modifications of motion due to the form and connection of parts.

12. *Mechanics of Materials*. This is an elementary course of study in the resistance of materials of engineering and the mechanics of beams, columns, shafts, etc. Part of the time will be given to lectures on the materials of construction, their properties, manufacture, etc.

13. *Measurement of Power and Engineering Laboratory*. The various methods for determining the amount of power as shown by dynamometers is studied and illustrated by laboratory tests. In the engineering laboratory, dynamometer tests of power will be made by transmission and absorption dynamometers. Engine and boiler tests will also be conducted.

14. *Advanced Machine Design*. A text-book covering a large range of engineering details will be studied in connection with advanced drawing-board work.

15. *Mechanics of Engineering*. A text in applied mechanics, consisting largely of practical problems, is intended to fix the use of theoretical mechanics in the mind of the student.

16. *Engineering of Power Plants*. A study is made of the design of engines, boilers, chimneys, and the various details of modern power plants.

17. *Original Design*. The student is required to design a machine or structure, either of his own suggestion or to fulfil the requirements of a specification. The work should be in connection with the thesis.

Courses 1, 2, 3 and 4 must be taken in the order named. Engineering students to graduate must have twelve terms of shop work to their credit and at least one term of each of the four courses named.

Means of Illustration. Carpenter shop, with 220 separate kits of tools, and benches for 45 students in each class; lathes, planer, circular saws, friezer, mortising machine, grinder, and tool room containing all kinds of woodworking tools for general use. Shops for ironwork contain 16 blacksmith forges; brass foundry, with 12 benches and 50-pound furnace; iron foundry, with two-ton cupola and good assortment of flasks; machine-shop, equipped for 30 students, with hand tools, six 14-inch engine-lathes, one speed lathe, planer, shaper, No. 2 Brown & Sharpe universal milling machine, Walker universal grinder, drills, bolt cutter, and tool room of fine tools. The heating and power plant attached form a part of the illustrative apparatus, containing five boilers, pumps, one 50-horse-power Ball & Wood engine, one 10-horse-power Atlas engine, 40-horse-power Belknap generator, and other illustrative apparatus. Wood shop is run by a 12-horse-power motor; iron shop, by an 8-horse-power.

For opportunities for apprentices, see page 41.

Military Training.

1. *Theoretical.* Students of the first year have one lesson each week of the winter term in drill regulations. A course in military science, supplemented by lectures, is given once a week during the second year. This is designed to show how an army is organized, equipped, and supplied; to explain some of the minor operations of war; to show the organization of the militia under the militia law of this state; to explain the laws of war, and the civil functions and relations of the military, etc. Instruction is afforded to such as desire it in other military subjects.

2. *Practical.* All young men below the third year in the regular course are assigned to drill, unless excused. Drills are required five times a week in fall and spring terms, and four times a week in the winter term. Special attention is given to "setting up," or physical development. The practical course in infantry embraces small-arms target practice, and, as far as possible, all the movements prescribed by the "Drill Regulations of the United States Army" that are applicable to a battalion. Instruction in artillery includes, as far as practicable, such portions of the United States drill regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, and firing blank cartridges.

The College battalion is divided into companies, which are officered by students appointed each term by the professor in charge, with the approval of the President. Arms and accouterments are furnished by the United States government. Uniforms for drill are furnished by the College. By order of the secretary of war, the names of the three most proficient fourth-year students are reported to the adjutant-general of the army and the adjutant-general of the state.

Means of Illustration. Armory, containing 225 stands of arms (breech-loading cadet rifles, caliber .45), with accouterments; two three-inch rifled guns; also swords, uniforms, etc.

Music.

1. *Vocal Music.* Instruction is furnished free of charge, under the direction of the Faculty. Classes meet on Thursday and Friday for advanced pupils, and for beginners on Tuesday and Wednesday. This study is taken up at the choice of the student, but regular attendance is required as at the other classes. The advanced class shares in the music of public exercises during commencement week.

2. *Instrumental Music.* Instruction upon the piano, organ, mandolin, guitar, and the more important orchestral and band instruments, is given free to students in the regular courses, under the following restrictions: It may be taken as an industrial by ladies only, in connection with their vocal music, after the required industrials of the first year, and after passing an examination equivalent to one term in vocal music, in which case one hour's daily practice at the College is required. It may be assigned as an extra to students, ladies or gentlemen, who do well in their general course of study, on the same conditions as above, excepting as to practice, for which students may furnish their own instruments at home.

Class organization shall be wholly under control of the professor in charge. Students in the music department shall be subject to the call of the professor for music connected with College exercises.

Students who are sufficiently advanced to join the College orchestra, or the mandolin, guitar and banjo club, or the College elementary band, or the College cadet band, which practices in connection with military drill, may become members by assignment.

Oratory.

The aim of this course is to develop the powers of the student's mind, that he may be able to think clearly for himself and to express his thoughts effectively in written or oral form. Practical work will be done according to natural and scientific methods. Occasional short talks or informal lectures will be given on topics relating to this department.

1. *Physical Culture.* Three terms are given in the general course, and two terms each in the agricultural and engineering courses. The

system of physical culture consists entirely of movements without apparatus, designed to give health, freedom, strength and grace to the body, in order that it may act quickly and truly in obedience to the highest thoughts, feelings and purposes of the soul. During the entire course daily drill will be given in the classroom on the exercises. The course is thoroughly practical, and will be of benefit to persons in any walk of life.

2. *Voice Culture.* Three terms in the general course, and two terms each in the agricultural and engineering courses. The voice work is designed to fit the voice to fulfil its highest function, namely, to be a willing servant of the soul, and consists of daily practice on exercises for freedom, flexibility, volume and harmony of voice.

3. *Rendering.* The work in rendering is based upon the natural order of unfoldment in the activities of the human mind, and is in accord with the latest approved pedagogical principles, the aim being to cultivate original thought and to produce that condition of mind and heart which shall result in personal power and character. This is done by bringing the pupil into vital relationship with the masterpieces of the greatest minds, and causing the pupils to reproduce in others the same mental states in which those great minds were when they wrote or spoke. The method is free from mechanical dictation, working always from within outward. The results are obtained entirely by means of arousing the activities of the pupil's mind through concentration upon proper objects of thought. Daily drill in rendering from the platform selections from standard authors, together with criticism and suggestions for practice, will be given throughout the course. The theory and philosophy of different phases of the work will be set forth as far as may be practicable in the time.

4. *Vocal Physiology and Visible Speech.* One hour per week during the second and third terms' work in the general course. In this course the science of articulate speech is presented, so as to give the pupil a knowledge of the laws of speech as applied to the English language, and also to give the exact scientific pronunciation of all the elements of speech. The aim is to furnish correct ideals of the elementary sounds and their combinations; to polish the speech; to improve the pronunciation; to cultivate the voice; and to teach the right use of the dictionary.

5. *Public Speaking.* Each third-year student in the general course is required to appear in public in chapel twice during the year, once in a declamation, and once in an original part. Each fourth-year student in the general course is required to appear in chapel once during the year in an original part. For the chapel work,

the students are prepared by private rehearsals with the professor in charge of the department.

6. *Graduating Theses.* During the spring term, each student who is to graduate is required to write an original thesis of not less than fifteen hundred words, under the direction of the professor in charge of the department in which the subject of the thesis belongs and the professor of oratory.

Physics.

1. *Elementary Physics.* First year, one term; all courses. This term's work is intended to give the students a general view of the subject, with such laws and principles as will be useful to them in scientific studies. Apparatus will be used and scientific investigation encouraged.

2. *Advanced Physics—Engineering Course.* Spring term, third year, three hours per week. Subjects: Sound and heat. Fall term, fourth year, five hours per week. Subjects: Light and electricity. A text-book will be used, supplemented by lectures and experiments. Meteorological subjects will be treated in connection with related subjects in physics.

3. *Advanced Physics—Agricultural and General Courses.* Fall term, fourth year, five hours per week. Subjects: General properties of matter, mechanics, sound, and heat.

4. *Light and Electricity.* Winter term, fourth year, five hours per week. Text-book study, recitations, lectures and experiments will be used as deemed best. Meteorology will be taught in connection with related subjects. In the agricultural course, special prominence will be given to soil moisture and related topics.

In all courses, special lines of reading will be encouraged, and investigation and experimentation so far as the equipment of the department will permit.

EXTENDED COURSE. Advanced work in physics is offered during each term. It must be preceded by the physics of the required course.

Means of Illustration. Complete physical apparatus, for general instruction in physics, and meteorological instruments, including a self-recording anemometer. Among the apparatus for special work may be mentioned, Coulomb's torsion balance, Kohlrausch differential galvanometer with reading telescope, Deprez-Carpenter ammeter, Ayrton and Perry's voltmeter, Thompson's potential and current galvanometers, Carhart-Clark standard cell, standard legal ohm, Wheatstone's meter bridge, dynamos. The distribution of power by electricity is illustrated at the College by a forty-horse-power generator and four motors, of 5, 8, 10 and 12 horse-power.

Psychology and Logic.

Psychology and Logic. Spring term, fourth year. The object of this course is to afford a clear understanding of the nature and operation of the mind. The laws of mental action, the general principles of intellectual and moral philosophy, the origin and development of thought, feeling, conscience, and will, the phenomena of sensation, emotion, perception, attention, discrimination, association, memory, imagination, reason, volition, reflex action, habit, instinct, illusion, hallucination, hypnotism, thought transference, etc., are subjects of investigation and explanation. The latest results of modern experimental psychology are made available, and a psychologic laboratory has been started, in order to afford superior opportunities for original investigation. Problems requiring careful introspection and observation are given the students from time to time, and the studies are reported and discussed in class one day in each week with most interesting results.

The problems are such as the following : What is the meaning of averted eyes ? The psychology of expression ; how to read the character in the face ; the imprint of thought and emotion in the features. What is the test of truth ? The psychology of bad manners. The conditions of strong and lasting friendship. The nature of humor and the psychology of laughter. What is genius ? How can we best discover our aptitudes and abilities, determine what work we are fitted to do, and make the most of ourselves and our opportunities ? The philosophy of life, and the formation of an ideal.

Special attention is given to the art of reasoning — inductive, deductive, and by analogy or direct comparison. The methods by which truth is discovered and science built up are carefully studied, and the chief varieties of fallacies particularly noted. The students discover and classify specimens of fallacious reasoning, making collections of illogic for guidance and warning. True methods of observation, experiment, introspection, analysis, classification, generalization and inference are taught; and an earnest effort is made to inculcate open-mindedness, tolerance, sympathy, respectful consideration of the opinions of others, careful investigation of every aspect of the questions that arise for consideration, and suspensions of judgment until the facts are thoroughly mastered and a hypothesis found that substantially fits them all.

James's Briefer Course is used as a basis for psychologic study.

Special use is also made of Mills's Logic. Lectures, reference reading, laboratory work, original researches and analyses, experiments, discussions and theses complete the means of study in this department.

Printing.

Practice Work. Fully occupying as it does double its former amount of floor space, possessing an amply-lighted composing room, and with augmented equipment, including much new type, the printing department affords better facilities than heretofore to the individual student for progress in all that tends to develop the first-class workman. As the printing industrial is open to both sexes, the classes are usually quite large and the stimulus of good example is not lacking; nevertheless, the instruction is of that character in which individual advancement is always taken into account, and opportunity is extended for individual growth in the knowledge of those principles which are of practical utility in the every-day work of a printing-office. Occasion for the gaining of experience and acquirement of skill is supplied by the publication of the weekly *Students' Herald*, the issuing of the monthly *Industrialist*, the execution of the wide range of job printing needed to furnish the various College departments with blanks, quiz and topic lists, lesson outlines and stationery, and the College societies with programs, notices, etc.; and in varied operations necessary to do all this economically and expeditiously.

The lessons embraced may be briefly summarized under these suggestive topics: The elements of news, book and job composition and imposition; proof-reading and correcting; plain and color presswork; adaptation of various grades of inks and papers; newspaper and magazine folding; wrapping and mailing; tableting of stationery; pamphlet stitching and stapling; and the systematic reading and classification of exchanges. Instruction in the more common technical terms and phrases, names of typographical tools and their uses, preparation of copy, spelling, capitalization, syllabication and punctuation is largely incidental, and in that way receives all the more emphasis, for accuracy in these matters is recognized as of great value in every walk of life.

Means of Illustration. Printing-office, with thirty pairs of cases; large fonts of six-point, eight-point and ten-point Roman type and italics; a good assortment of wood and metal job type and brass rule; a Babcock cylinder press and a New Liberty quarto-medium job press, run by electric motor; a Gordon eighth-medium job press; mitering, rule-curving and stapling machines; paper-cutter, cabinets, stands, imposing stones, etc.

For opportunities for apprentices, see page 41

BARN AND SHEDS.

Veterinary Science and Biology.

1. *Hygiene of Farm Animals.* Fall term, second year. As the name indicates, this includes a study of the laws of health relating to farm animals, and incidentally also the laws of health relating to the farm home. These two subjects bear an intimate relation to each other. Among the subjects discussed may be mentioned the following, viz.: The laws of health and disease; care of the various organs of the body; influence of climate, soil, and water; impurities and diseases of foodstuffs; animal parasites and their life-histories; injurious insects; breeding; quarantining; disinfection, etc. All these subjects are discussed purely as they have a practical bearing on the health of man and beast. This course consists of lectures and reference reading.

2. *Anatomy and Physiology.* Spring term, second year. For students in the agricultural and general courses. The structure of the body, including the form and uses of the skeleton and the muscles. The form, size and position of the various internal organs are first considered. Following this the various functions of these organs, such as digestion and growth of tissue, circulation of blood and lymph, respiration, secretion and excretion, the nervous system, and the special senses. This subject is taught with its practical application to the laws of health constantly in view. A few dissections of cadavers of dogs and cats are made before the class, and when practicable students will be permitted to assist in this work. This course must precede biology, comparative anatomy, agricultural bacteriology, and veterinary science. Recitations are from Martin's Human Body, with lectures and illustrations.

3. *Biology.* Winter term, third year. This includes in a very general way the study of the science of life, protoplasm, the cell theory, etc. Following this a study of the animal kingdom, its classification, the origin and distribution of animals, etc. This subject will be made as practical as possible, and every student will be obliged personally to dissect a number of the lower animals, make drawings of the parts, and thus become familiar with the structure of the beings whose interesting physiology he studies. One of the valuable features of this study is the attending development of the powers of observation in a manner that is impossible by any other means. Lectures, recitations, and laboratory work. This study must precede agricultural bacteriology and veterinary science.

4. *Agricultural Bacteriology.* Fall term, fourth year. This is bacteriology as applied to practical farm problems. Special attention is given to the germ life that is active in the dairy and creamery, its relation to the character of the product turned out, the flavor and

keeping qualities of milk, butter, and cheese, diseases of these products, etc. Bacteria, as nitrifiers in the soil, as agents of fertility, and as causes of disease, are studied. Students will learn to stain and mount disease germs, examine them under high-power microscopes, to isolate species and cultivate them in artificial food media, and the endless variety of other interesting work connected with the study of general bacteriology. Must precede veterinary science. Lectures and laboratory work.

5. *Comparative Anatomy.* Fall and winter terms, fourth year. This includes a study of the anatomy of the horse, with references to similarities and differences in the other domestic animals. It must precede the study of veterinary science. Lectures and illustrations.

6. *Veterinary Science.* Spring term, fourth year. The aim of this course is by no means to make veterinary surgeons. This it is absolutely impossible to do in so short a time. But with the studies in biology, farm hygiene, agricultural bacteriology and comparative anatomy preceding a course of lectures on *veterinary science*, it is intended to make a young man thoroughly familiar with the ordinary causes of disease and with the latest successful methods of avoiding and combating them. A few common infectious diseases of farm animals are discussed in detail. The study of lameness of the horse, selection of horses for given purposes, etc., will constitute part of the term's work. Most diseases of farm animals can be prevented by intelligent foresight. It is our aim to train young men to exercise this foresight. Lectures and recitations.

7. *Histology.* Arrangements will be made to give instruction in the technique of the microscope and in histology to a class consisting of a limited number of students. This class will be open only to such students as do exceptionally satisfactory work in other branches of natural science.

Means of Illustration. The zoölogical museum, containing numerous representatives of the several classes, especially full in the fishes and mollusks of Kansas, and in illustrations in economic and systematic entomology. Increasing material in skins, alcoholic and anatomical preparations are available also for the use of the student. For veterinary work there is provided a laboratory fitted with apparatus, instruments and reagents for the study and treatment of disease. An Azoux model of a horse, which is dissectible, showing nearly 1,000 anatomical structures, skeletons, charts, and a large collection of anatomical specimens, showing healthy and diseased structures.

General Information.

EXAMINATIONS.

Examinations for admission are held at the beginning of each term, as laid down in the calendar of the College year. Applicants entering at any other time during the term have special examinations. These examinations are chiefly written, and a standard of seventy per cent. is required to pass any study.

Examinations in the course are held as arranged by the Faculty. The results of these examinations are marked on a scale of 100, and combined with the average of the preceding daily exercise upon the same scale into a grade for report to the Secretary.

Averages of grades in the register are made by giving the final term grade a value of two-thirds, and previous grades a value of one-third. After each term examination during the first year of attendance, a report of advancement is made to parents ; and any student upon leaving College at the close of a term, may receive a certificate of standing.

The final grade and the term average must be at least seventy for passing any study ; and any student who fails to pass in two studies of the course may either drop back a year or withdraw from College.

After completing the studies of the first year, students are allowed special examinations only upon recommendation of the professor in charge, and by permission of the Faculty. Permission for examination in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive.

Candidates for graduation must make good all deficiencies before entering upon the work of the spring term of the fourth year.

Students are not catalogued in the third-year class unless deficiencies of previous years are provided for.

Students deficient in entrance studies must make good such deficiencies before entering upon the work of the second year.

TERMS OF ADMISSION.

Applicants for admission at the beginning of the College year must be at least fourteen years of age, and able to pass a satisfactory examination in reading, spelling, writing, arithmetic, geography, English grammar, and United States history. Specimen questions will be furnished on application. Those applying later in the year must show sufficient advancement to enter the classes already in progress.

Entrance can be made at any time; but after a term has commenced it is sometimes difficult to find suitable classes for a new student, and the farther advanced the term, the greater is this difficulty. It is best, therefore, that entrance should be made on the first day of a new term.

The following diplomas and certificates will be received in lieu of entrance examinations :

1st. Diplomas received on the completion of a county course of study which has been approved by the Faculty, when properly signed by the county superintendent.

2d. Certificates of passing the grammar grade in any city school with a course of study approved by the Faculty, when properly signed by the city superintendent.

Certificates of passing the ninth grade in the Manhattan city schools will be taken as sufficient for admission only at the beginning of the fall term.

3d. Kansas teachers' certificates issued by the county board of examiners, showing that the above-named studies have been passed with a grade of at least seventy per cent.

Counties and cities on the accredited list may be called upon at any time to furnish evidence that they are maintaining a satisfactory standard of scholarship.

The Faculty have approved the courses of study adopted by the following cities and counties; others may be submitted for approval at any time:

CITIES.

Abilene,
Alma,
Anthony,
Argentine,
Arkansas City,
Atchison,
Augusta,
Baldwin,
Belleville,
Beloit,
Burlingame,
Burlington,
Caldwell,
Chanute,
Cherryvale,
Chetopa,
Clay Center,
Clifton,
Coffeyville,
Columbus,
Concordia,
Council Grove,
Dexter,
Dodge City,
El Dorado,
Ellsworth,
Emporia,
Eureka,
Fort Scott,
Fredonia,
Garden City,
Garnett,
Gaylord,
Girard,
Great Bend,
Hiawatha,
Holton,
Horton,
Humboldt,
Hutchinson,
Independence,
Iola,
Junction City,
Kanopolis,
Kansas City,
Kingman,
La Cygne,
Larned,
Lawrence,
Leavenworth,
Lebo,
Lincoln,
Lyons,
Manhattan,
Mankato,
Marion,
McPherson,
Minneapolis,
Neodesha,
Newton,
Olathe,
Osage City,
Osborne,
Oswego,
Ottawa,
Paola,
Parsons,
Pittsburg,
Pomona,
Pratt,
Russell,
Salina,
Scranton,
Sedan,
Seneca,
Solomon City,
St. Mary's,
Topeka,
Valley Falls,
Wamego,
Washington,
Waverly,
Wellington,
Wellsville,
Winfield,
Wichita.

COUNTIES.

Allen,
Anderson,
Barber,
Brown,
Bourbon,
Butler,
Chase,
Cherokee,
Clay,
Cloud,
Cowley,
Dickinson,
Doniphan,
Douglas,
Elk,
Ellis,
Ford,
Franklin,
Geary,
Greenwood,
Harper,
Harvey,
Jackson,
Jefferson,
Jewell,
Johnson,
Kingman,
Labette,
Leavenworth,
Lincoln,
Linn,
Lyon,
Marshall,
Marion,
McPherson,
Miami,
Mitchell,
Montgomery,
Morris,
Nemaha,
Neosho,
Ness,
Osage,
Osborne,
Ottawa,
Phillips,
Pottawatomie,
Republic,
Reno,
Rice,
Riley,
Rooks,
Rush,
Russell,
Saline,
Sedgwick,
Shawnee,
Smith,
Sumner,
Wabaunsee,
Washington,
Wichita,
Wilson,
Woodson,
Wyandotte.

COUNTY HIGH SCHOOLS.

Atchison,
Dickinson.

Diplomas of graduation from these two county high schools will give the student second-year standing, except in certain work distinctive of this institution.

Preparatory classes in arithmetic, grammar, geography and United States history are provided for those over eighteen years of age who have not been able to make their preparation in the common schools. Those expecting to enter these classes take the same entrance examinations as indicated above, and are then assigned to classes in those studies in which they prove deficient.

Applicants for advanced standing in the course must pass examination in all the previous studies of the class to be entered; but, if they have pursued such studies in other institutions of similar rank, they may receive credit for their standing in those institutions, upon presenting a certificate from the proper officer, showing that their course has been equivalent to that given here.

A mature student may be permitted to deviate from the regular course of study.

HOSPITANTS.

That mature persons not able to attend College continuously may nevertheless be able to enjoy, in a measure, the privileges of the institution, an invitation has been extended to all citizens of Kansas who may be so disposed to visit the College, its lectures, laboratories, library, shops, and various departments, and to avail themselves as fully of its advantages as may be consistent with their wishes, with the needs and duties of the regular students, and with the harmonious and successful working of the institution. Following are certain rules concerning hospitants:

Persons regularly attending any of the classes of Kansas State Agricultural College, without assuming the regular duties of students, will be known as hospitants, and —

1. Must be persons of mature age, whose attendance on regular College duties is obviously impracticable.

2. Must be properly enrolled at the President's office.

3. May attend any of the regular classes of the institution, subject to the same regulations, with regard to punctuality and attendance, as are imposed upon regular students, except as to recitations and examinations.

4. May use the library as regular students.

5. Are not entitled to laboratory privileges without special recommendation of the professor in charge and the permission of the Faculty.

GENERAL DUTIES AND PRIVILEGES.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character, by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week-day except Mondays, and no student may be absent without excuse.

Students enrolled in any term cannot honorably leave the College before the close of the term, unless excused beforehand. A full and permanent record of attendance and scholarship shows to each student his standing in the College.

Chapel exercises occupy fifteen minutes before the meeting of classes each morning, and absence from them is noted. On Sunday no services are held in the chapel, but students are advised to attend the different churches of the city.

Every Saturday, at 1:30 P. M., the whole body of students gathers for a public lecture, or for rhetorical exercises of the third- and fourth-year classes.

On certain Saturday afternoons in the fall term, lectures on economics, sociology and the duties of citizens are delivered in the College chapel, to the entire student body. In the winter term, chapel lectures on agriculture, horticulture and related subjects are similarly delivered to all. Attendance upon all these lectures is required. Students take notes, and are tested upon their knowledge of the subject-matter.

Systematic training in gymnastic and calisthenic exercises is provided for both young men and young women, under teachers appointed by the College.

There are four prosperous literary societies, which meet weekly, in rooms set apart for their use. The Alpha Beta, open to both sexes, and the Ionian, for young women, meet Friday afternoon. The Webster and the Hamilton admit to membership young men only, and meet on Saturday evening.

The students' Farmers' Club meets weekly to discuss farm questions, and furnishes a valuable part of the education offered.

The Young Men's and the Young Women's Christian Associations hold weekly meetings. They appoint reception committees to meet new students at the trains, to assist them in finding suitable boarding places, and to aid them in various ways. The two associations publish, for free distribution, a handbook containing a map of the town, information concerning the College, and other matters of interest to students.

Once in each term the College Hall is opened for a social gathering of Faculty and students, in which music, literary exercises and friendly greeting find place.

LABOR AND EARNINGS.

Every encouragement is given to habits of daily manual labor during the College course. Only one hour daily practice in the industrial departments is required; but students are encouraged to make use of other opportunities for adding to their ability and means.

All labor at the College is under the direction of the superintendents of the departments, and offers opportunities for increasing skill and efficiency. In regular daily statements, the students are required to observe business forms and principles, showing when and where the work was performed.

The shops and offices are opened afternoons and Mondays for the accommodation of skilled students in work for their own advantage. Everywhere the student who works wins respect; and it is a matter of pride to earn one's way as far as possible.

The labor of the students in the industrial departments is a part of their education, and is not paid for. Other student labor, however, is employed upon the farm, in the gardens, shops, and printing-office, and about the buildings. Such labor is usually paid for at rates varying with services rendered, from eight to ten cents an hour. The superintendents strive to adjust their work to the necessities of students and give them the preference in all tasks suitable for their employment. So far as practicable, the work of the shops and offices is turned to account for their benefit; and the increasing extent of the grounds and sample gardens brings more of such labor. The monthly pay-roll for the past year averages about $400.

Many students obtain work in the city or upon neighboring farms, and so pay part of their expenses. In these ways some students are able to earn their way through College. The amount so earned will vary according to the tact and zeal of the student. The majority must expect to provide for earnings outside of term time, or from other sources, for the larger part of their expenses. The long summer vacation of three months offers opportunity for farm or other remunerative labor; and no one need despair of gaining an education if he has the ability to use his opportunities well.

EXPENSES.

Tuition is free to all, irrespective of residence in Kansas; and no fee for incidental or contingent expenses is charged.

The cost of text-books at the book-stores has been, for the first year, about $9; for the second year, about $10; for the third year, about $13; and for the fourth year, about $15. In future the College will maintain a book-store, at which students may obtain their books and supplies at cost, the prices, therefore, being less than the retail prices mentioned below.

The expense for apparatus and tools to each student during the course is as follows: Drawing, $4.05; microscope for botany and entomology, $1.50; case, pins, etc., for entomology, $2.25; herbarium, $1.50. The total expense for these articles during the four years is less than $10.

Full board and washing are not furnished by the College. Board, with furnished room, can be procured in private families at from $2.50 to $3.50 per week, or table board in student clubs from $1.50 to $2.25 per week. Some students board themselves at even less cost; and rooms for the purpose can be obtained at a rent of from $1 to $3.50 a month. Washing costs from fifty cents to $1 a dozen pieces.

Within the past year the College has established a students' and professors' dining-hall, in which midday lunches may be obtained throughout the year at cost; the price being ten cents per meal, or less. This hall is largely patronized.

Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 a year. No institution in the state furnishes an education at less cost to the student.

NAMES AND PRICES OF TEXT-BOOKS.

FIRST YEAR.

Wells's Higher Algebra, edition of 1895, $1.35.
Bergen's Elements of Botany, $1.25.
Hitchcock's Key to Genera of Manhattan Plants, 50 cents.
Walters's Free-hand Drawing, 25 cents.
Sickles's Exercises in Woodworking, $1.
Swinton's Word Analysis, 40 cents.
Low's English Language, 65 cents.
Pierce's College Manual of Bookkeeping, $1.
Walters's Elementary Graphics, book 1, 75 cents.
Emerson's Evolution of Expression, volume I, 50 cents.

United States Infantry Drill Regulations, 30 cents.
Voorhees's First Principles of Agriculture, 90 cents.
Hotze's Elementary Physics, 55 cents.
Genung's Outlines of Rhetoric, $1.10.

SECOND YEAR.

Wentworth's New Plane and Solid Geometry, $1.35.
Remsen's Introduction to the Study of Chemistry, $1.35.
Newcomer's English Composition, 80 cents.
Roberts's Fertility of the Land, $1.
King's The Soil, 90 cents.
Pettit's Elements of Military Science, $1.
Campbell's Household Economics, $1.50.
Lincoln's Boston School Kitchen Text-book, $1.
Martin's Human Body, $1.40.
Wentworth's Analytical Geometry, $1.25.
Myers's General History, $1.65.
Walters's Elementary Graphics, book II, 75 cents.
Remsen's Organic Chemistry, $1.30.
Wing's Milk and its Products, $1.
W. A. Noyes's Qualitative Analysis, 85 cents.
Wentworth's New Plane and Spherical Trigonometry and Surveying, $1.35.
Emerson's Evolution of Expression, volume II, 50 cents.
Kidder's Outline of "Bell's Visible Speech," $1.
United States History.
Smith's Economic Entomology, $2.25.

THIRD YEAR.

Orton's Zoölogy, $1.80.
Dana's Elementary Mechanics, $1.50.
Fiske's Civil Government, $1.
Henry's Feeds and Feeding, $2.
Emerson's Evolution of Expression, volume III, 50 cents.
Jamieson's Applied Mechanics, $1.25.
Bonney's Story of Our Planet, $3.50.
Merriman's Hydraulics, $4.
Robinson's Principles of Mechanism, $4.
Genung's Practical Rhetoric, $1.25.
Walters's Free-hand Drawing, book IV, 20 cents.
Miles's Stock-Breeding, $1.25.

FOURTH YEAR.

Barker's Physics, $3.50.
Pancoast's English Literature, $1.50.
Wright's Industrial Revolution of the United States, $1.

Merriman's Mechanics of Materials, $4.
Flather's Measurement of Power, $2.
Ely's Socialism and Social Reform, $1.50.
Hitchcock's Woody Plants of Manhattan, 30 cents.
Bevis and Low's Machine Design, $2.50.
Perry's Applied Mechanics, $2.50.
Emerson's Evolution of Expression, volume IV, 50 cents.
James's Psychology, $1.60.
Hodgkin's Literature Leaflets, 30 cents.
Hutton's Engineering of Power Plants, $4.
Walker's International Bimetalism, $1.
Hough's Forestry, $1.25.

MUSIC AND INDUSTRIALS.

Music.

Instrumental music, standard text-books and studies, from $1 to $3 per term.

Vocal music, from 60 cents to $2 per term.

Carpenter Shop.

Sickles's Exercises in Woodworking (for first term in shop work), $1.

Printing.

Wilson's Treatise on Punctuation, $1.50.

BUSINESS DIRECTIONS.

General information concerning the College and its work, studies, examinations, grades, boarding places, etc., may be obtained from the President or the Secretary.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid from the office of the Treasurer.

All payments of principal and interest on account of bonds or land contracts must be made to the state treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. Thos. E. Will, managing editor. Subscriptions are received by Supt. Chas. S. Davis.

Donations for the library should be sent to the Librarian; donations for the museum, to the chairman of the Committee on Museums.

Applications for farmers' institutes should be addressed, as early in the season as possible, to the President or Secretary.

The Experiment Station should be addressed through the Secretary of the Station.

CROSSCUP & WEST ENG. CO.
PHILA. PA.

STUDENTS JUDGING THE DAIRY CATTLE.

Graduates.

This list is made from the best data obtainable. A favor will be conferred by notifying the College Secretary of any errors or changes.

1867.

Henry L. Denison, A. M., Denver, Colo. United States court reporter.
Belle M. (Haines) Pond, A. M., Topeka, Kan. Housewife.
Emma L. (Haines) Bowen, A. M., Manhattan, Kan. Housewife.
John J. Points, A. M., Omaha, Neb. Lawyer.
Martha A. (White) Abbott, A. M., Chicago, Ill. Housewife.

1871.

Emily M. (Campbell) Robinson, A. B. Died in 1877.
Ella F. (Denison) Whedon, A. B., Lincoln, Neb. Housewife.
Luella M. Houston, A. B., Concordia, Kan. Milliner and dressmaker.
Charles O. Whedon, B. S., Lincoln, Neb. Lawyer.
Kate E. (White) Turley, A. B., Chicago, Ill. Housewife.

1872.

Theophania M. (Haines) Huntington, A. B. Died in 1880.
Albert Todd, A. M., St. Augustine, Fla. Lieutenant First U. S. artillery.
S. Wendell Williston, A. M., M. D., Lawrence, Kan. Professor of paleontology, State University.

1873.

Eliza Z. (Davis) Stringfield, A. B., Pomona, Cal. Housewife
Sam Kimble, A. B., Manhattan, Kan. Lawyer.

1874.

Harry A. Brous, A. M., M. D., Philadelphia, Pa. Physician.
Edgar F. Clark, A. B., New Whatcom, Wash. Lawyer.
John E. Davis, B. S., D. D. S., Oakland, Cal. Dentist.
William D. Gilbert, A. B., Atchison, Kan. Lawyer.
A. Judson White, A. B., Manhattan, Kan. Minister.

1875.

Reuben E. Lofinck, B. S., Manhattan, Kan. Merchant.
Alice E. (Stewart) Points, A. M., Matawan, N. J. Teacher.

1876.

George A. Gale, A. B., Mangona, Fla. Merchant.
Ella M. (Gale) Kedzie, A. B., Lansing, Mich. Teacher of art.
Nellie (Sawyer) Kedzie, M. S., Peoria, Ill. Professor of household economy and hygiene, Bradley Polytechnic Institute.
Carrie M. Kimball, A. B., Garden Grove, Cal. Art instructor.
Minerva E. (Whitman) Heiser, A. B., Lyndon, Kan. Housewife.

1877.

Ella S. Child, B. S., Manhattan, Kan. Dressmaker.
George H. Failyer, M. S., Manhattan, Kan. Book dealer.
John S. Griffing, M. S., Topeka, Kan. Merchant.
Walter C. Howard, B. S., Truckee, Cal. Minister.
Frederick O. Hoyt, B. S. Died in 1884.
Louis E. Humphrey, B. S., Chapman, Kan. Druggist.
James F. La Tourette, B. S., Idaho Springs, Colo. Miner.
Marion F. Leasure, B. S., LL. B., La Cygne, Kan. Lawyer.
William Ulrich, M. S., Manhattan, Kan. Contractor and builder.

1878.

Albert N. Godfrey, M. S., ——, Wash. Farmer and fruit-grower.
Charles S. McConnell, B. S., Kansas City, Mo. Printer.
Geo. S. Platt, B. S. Died in 1878.
Amos E. Wilson, B. S., Leavenworth, Kan. Banker.

1879.

Arthur T. Blain, B. S., Lacanada, Cal. Nurseryman.
Etta (Campbell) Blain, B. S., Lacanada, Cal. Housewife.
Wilmer K. Eckman, B. S., Logansport, La. Lumber dealer.
Corvin J. Reed, B. S., St. Clere, Kan. Farmer.
Harry C. Rushmore, B. S., Kansas City. Merchant.
Wm. H. Sikes, B. S., Leonardville, Kan. Merchant and grain dealer.
Lewis A. Salter, B. S., Alva, O. T. Lawyer.
Ella (Vincent) McCormick, B. S., Clay Center, Kan. Bookkeeper.
Clarence E. Wood, B. S., A. B., Erwin, O. T. Farmer.

1880.

Augustine Beacham, B. S., Seattle, Wash. Principal of schools.
Lizzie R. (Cox) Kregar, B. S., Milford, Kan. Housewife.
Emma (Hoyt) Turner, B. S., Cloquet, Wis. Housewife.
Emma (Knostman) Huse, B. S., Arkansas City, Kan. Housewife.
Grace (Parker) Perry, B. S., Pocatello, Idaho. Housewife.
Noble A. Richardson, B. S., San Bernardino, Cal. Principal of high school.
Maria E. (Sickels) Davis, B. S., Chicago, Ill. Housewife.

1881.

Flora (Donaldson) Reed, B. S., St. Clere, Kan. Housewife.
Ulysses G. Houston, B. S., Concordia, Kan. Lecturer.
Fletcher M. Jeffrey, B. S., Cripple Creek, Colo. Lawyer.
William J. Jeffrey, B. S., Boston, Mass. Law student, Boston University.
Darwin S. Leach, B. S., ——, Africa.
William J. Lightfoot, B. S., Cripple Creek, Colo. Deputy United States mineral surveyor.
Dalinda (Mason) Cotey, B. S., Logan, Utah. Professor of domestic economy, Utah Agricultural College.
Wirt S. Myers, B. S., Tampa, Fla. Furniture manufacturer.

1882.

J. Chester Allen, B. S. Died in 1885.
Ida (Cranford) Sloan, B. S., Stillwater, Cal. Housewife.
Edward V. Cripps, B. S., ——.
Warren Knaus, M. S., McPherson, Kan. Editor and postmaster.
Mattie E. (Mails) Coons, B. S., Manhattan, Kan. Housewife.
Allie S. (Peckham) Cordry, B. S., Minneapolis, Kan. Housewife and art teacher.
Belle (Selby) Curtice, B. S., Kansas City, Mo. Housewife.
Burton L. Short, B. S., Kansas City, Kan. City clerk.
John A. Sloan, B. S., Stillwater, Cal. Farmer and nurseryman.

1883.

James W. Berry, B. S., Jewell City, Kan. Farmer, contractor, and builder.
Mary C. Bower, B. S., Manhattan, Kan. Clerk.
Lewis W. Call, B. S., LL. M., Washington, D. C. Chief clerk, judge-advocate general's office, U. S. war department.
Emma E. Glossop, B. S., Valparaiso, Ind. Teacher city schools.
William J. Griffing, B. S., Manhattan, Kan. Farmer and fruit-grower.
Phœbe E. Haines, M. S., Manhattan, Kan. Postgraduate student and student assistant, Kansas State Agricultural College.
Hortense L. (Houston) Martin, B. S., Concordia, Kan. Housewife.
Jacob Lund, M. S., Manhattan, Kan. Engineer, Kansas State Agricultural College.
Katie I. (Meguire) Sheldon, B. S., Riverside, Cal. Housewife.
J. Dana Needham, B. S., Lane, Kan. Merchant.
Milan T. Ward, B. S., M. D., Orion, Ill. Physician.
Julius T. Willard, M. S., Manhattan, Kan. Professor of applied chemistry, Kansas State Agricultural College.

1884.

Emmett S. Andress, B. S., Lakin, Kan. Farmer.
Florence J. Brous, B. S., Kansas City, Kan. Teacher.
Bartholomew Buchli, M. S., D. V. S., Alma, Kan. Teacher and farmer.
John H. Calvin, B. S., LL. B., Topeka, Kan. Lawyer.
Wm. A. Corey, B. S., Salt Lake City, Utah. Teacher and editor.
Henry M. Cottrell, M. S., Manhattan, Kan. Professor of agriculture, Kansas State Agricultural College.
Carrie F. (Donaldson) Brown, B. S., Portland, Ore. Housewife.
Florence A. Donaldson, B. S. Died in August, 1888.
Frank W. Dunn, B. S., Lawrence, Colo. Assayer.
I. Day Gardiner, B. S., Wakefield, Kan. Farmer.
Edwin H. Kern, B. S., Cripple Creek, Colo. Mining engineer.
Marion M. Lewis, B. S., Portland, Ore. Minister.
Charles L. Marlatt, M. S., Washington, D. C. First assistant in entomological division, United States department of agriculture.
Lincoln H. Neiswender, B. S., Silver Lake, Kan. Farmer.
Geo. C. Peck, B. S., Junction City, Kan., Printer.
Hattie L. (Peck) Berry, B. S., Jewell City, Kan. Housewife.
John W. Shartel, B. S., Guthrie, O. T. Lawyer.

1885.

Thomas Bassler, B. S., Batchelder, O. T. Miller.
Albert Deitz, B. S., Kansas City, Mo. Merchant.
George E. Hopper, M. S., Arkansas City, Kan. Superintendent of water-works.
Florence F. Hough, B. S., Melrose, Iowa.
Frank A. Hutto, B. S., Stillwater, O. T. Lawyer.
J. Allen Lewis, M. S., C. E., Chicago, Ill. Civil engineer.
Nellie J. Murphy, B. S., South Denver, Colo. Trained nurse.
Arthur L. Noyes, B. S., Wabaunsee, Kan. Farmer.
Clarence D. Pratt, B. S., Dallas, Tex. General agent paint company.
Rollin R. Rees, B. S., Minneapolis, Kan. County attorney.
Frederick J. Rogers, M. S., Ithaca, N. Y. Instructor in physics, Cornell University.
Dorothy E. C. (Secrest) Hungerford, B. S.. Randolph, Kan. Housewife.
Grace Wonsetler, B. S., Verbeck, Kan. Teacher.
Effie E. (Woods) Shartel, B. S., Guthrie, O. T. Housewife.

1886.

Lillie B. Bridgeman, M. S., San Diego, Cal. Teacher of science.
Louis P. Brous, M. S., Kansas City, Kan. Teacher of drawing.
Paul H. Fairchild, B. S., M. D., New York, N. Y. Publisher of medical journals.
Abbott M. Green, B. S., Adin, Cal. Civil engineer and teacher.
James G. Harbord, M. S., Fort McIntosh, Tex. Lieutenant Fifth cavalry, U. S. A.
John U. Higinbotham, B. S., Chicago, Ill. Cashier biscuit manufacturing company.
Maria C. (Hopper) Getty, B. S., Downs, Kan. Housewife.
E. Ada (Little) MacEwan, B. S., Logan, Utah. Housewife.
Frank L. Parker, B. S., Hutchinson, Kan. Merchant.
Edward H. Perry, B. S., Perry, O. T. Editor and publisher.
H. Augustus Platt, B. S., Guthrie, O. T. Editor.
Ada H. (Quinby) Perry, B. S., Perry, O. T. Housewife.
Ida H. (Quinby) Gardiner, Wakefield, Kan. Housewife.
Minnie Reed, M. S., San Diego, Cal. Teacher of science.
David G. Robertson, B. S., Chicago, Ill. Lawyer.
Edward O. Sisson, B. S., Peoria, Ill. President Bradley Polytechnic Institute.
John W. Van Deventer, B. S., Sterling, Colo. Editor and publisher.
George W. Waters, B. S., Dillon, Colo. Teacher.
William E. Whaley, B. S., Chicago, Ill. Instructor in history, South Side school.
F. Henrietta (Willard) Calvin, B. S., Topeka, Kan. Housewife.
John L. Wise, B. S., Smithboro, Ill. Merchant.

1887.

Edgar A. Allen, B. S., Albuquerque, N. M. Superintendent of Indian school.
Fred H. Avery, B. S. Died in 1896.
Claude M. Breese, M. S., Manhattan, Kan. County clerk.
John B. Brown, M. S., Hoyt, Kan. Superintendent of Indian school.
Walter J. G. Burtis, B. S., Fredonia, Kan. Farmer.

Mark A. Carleton, M. S., Washington, D. C. Assistant in division of vegetable pathology, U. S department of agriculture.
Nellie E. (Cottrell) Stiles, B. S., Lakeside, Cal. Housewife.
Bert R. Elliott, B. S., Dyea, Alaska. Merchant and freighter.
Frederick B. Elliott, B. S., Manhattan, Kan. Real-estate and insurance agent.
Clara M. Keyes, B. S., Warner, Cal. Teacher.
Fred. G. Kimball, B. S., Hastings, Neb. Railway postal clerk.
Frederick A. Marlatt, B. S., Manhattan, Kan. Farm-implement manufacturer.
William J. McLaughlin, B. S., Bern, Kan. Teacher and editor.
Mary E. Moses, B. S., Manhattan, Kan. At home.
Charles A. Murphy, B. S., Kingman, Kan. Superintendent of schools.
Orlando G. Palmer, B. S., LL. M., Perry, O. T. Superintendent of schools.
Louis B. Parker, B. S. Died in 1889.
James E. Payne, M. S., Cheyenne Wells, Colo. Superintendent Rainbelt Experiment Station.
Seward N. Peck, B. S., Topeka, Kan. Cabinet-maker, railroad shops.
George N. Thompson, B. S., Belmond, Iowa. Mechanic.
Willis M. Wright, B. S., Jennings, La. Farmer.

1888.

Grant Arnold, B. S., Toledo, Wash. Teacher.
Bertha H. Bacheller, M. S., Kansas City, Mo. Teacher of domestic economy.
Clement G. Clarke, B. S., New Haven, Conn. Instructor, Yale University.
Alexander C. Cobb, B. S., Wagoner, I. T. Farmer and carpenter.
Mattie (Cobb) Clarke, B. S., New Haven, Conn. Housewife.
Minnie H. Cowell, B. S., Cairo, Egypt. Hospital nurse.
Lyman H. Dixon, B. S., Buffalo, N. Y. Architect.
David G. Fairchild, M. S., Geneva, N. Y. Botanist, experiment station.
Carl E. Friend, B. S., Soldier, Kan. Banker.
John R. Harrison, B. S., Salina, Kan. Inspector of post-offices.
Humphrey W. Jones, B. S., Alma, Kan. Principal of schools.
Nathan E. Lewis, B. S., Bridgeport, Conn. Mechanical engineer.
Abbie L. Marlatt, M. S., Providence, R. I. Teacher of domestic science, manual training school.
William C. Moore, B. S., Junction City, Kan. Editor and publisher.
Ernest F. Nichols, B. S., Hamilton, N. Y. Professor of physics, Colgate University.
Harry E. Robb, B. S., Eureka, Kan. Farmer and county surveyor.
Anna Snyder, B. S., Emporia, Kan. Student, State Normal School.
Edwin H. Snyder, B. S., Highlands, Colo. Editor.
Oliver L. Utter, B. S., Boston, Mass. Minister.
Aaron Walters, B. S. Died in 1892.
Lora L. Waters, M. S., Manhattan, Kan. Teacher.
Daniel W. Working, jr., B. S., Denver, Colo. Editor.

1889.

Emma A. Allen, B. S. Died in 1891.
Joseph W. Bayles, B. S., Auburn, Kan. Minister.
Walter R. Browning, B. S., Padonia, Kan. Grain dealer.
David E. Bundy, B. S., Leavenworth, Kan. Minister.
Samuel S. Cobb, B. S., Wagoner, I. T. Cattle dealer.
Judson H. Criswell, B. S., Manhattan, Kan. Farmer.
Mattie I. (Farley) Carr, B. S., Winthrop, Wash. Housewife.
Clarence E. Freeman, M. S., Chicago, Ill. Special student in electricity, Armour Institute.
Hattie L. (Gale) Sanders, B. S., Mangona, Fla. Housewife.
John S. Hazen, B. S., Des Moines, Iowa. United States weather bureau observer.
Albert B. Kimball, B. S., Scandia, Kan. Editor and postmaster.
William Knabb, B. S., Hiawatha, Kan. Bank clerk.
Mary C. Lee, B. S., Lawrence, Kan. Student, State University.
Alonzo A. Mills, B. S., Kamas, Utah. Manager of creamery.
Susan W. Nichols, B. S., St. Joseph, Mo. Music teacher.
Walter H. Olin, M. S., Ottawa, Kan. Superintendent of schools.
Eli M. Paddleford, B. S., Boston, Mass. Minister.
Maude F. Sayers, B. S., Ottawa, Kan. Bookkeeper.
Florine (Secrest) Linderman, Willow Glen, San Jose, Cal. Housewife.
Stanley Snyder, B. S., Oskaloosa, Kan. Farmer.
Charles W. Thompson, B. S., Holton, Kan. Dentist.
Jane C. Tunnell, B. S., Mt. Carroll, Ill. Teacher.

Ina M. (Turner) Bruce, B. S., St. Louis, Mo. Housewife.
Robert U. Waldraven, B. S., Rosedale, Kan. Minister.
Henry S. Willard, B. S., M. D., Manhattan, Kan. Physician and druggist.

1890.

Samuel I. Borton, B. S., Virgil, Kan. Teacher.
Frank A. Campbell, B. S., Highlands, Colo. Reporter.
Arthur F. Cranston, B. S., Parsons, Kan. Lawyer.
John Davis, B. S., Blackwell, O. T. Teacher.
Grant W. Dewey, B. S., Manhattan, Kan. Photographer.
Charles J. Dobbs, B. S., Topeka, Kan. Lawyer.
Charles W. Earle, B. S., Denver, Colo. Advertising agent.
Schuyler C. Harner, B. S., Lasita, Kan. Teacher and farmer.
John W. Ijams, B. S., Orlando, O. T. Teacher.
Bertha S. (Kimball) Dickens, M. S., Bushton, Kan. Housewife.
Harriet E. (Knipe) Curtis, B. S., Elgin, Ill. Housewife.
Nellie P. (Little) Dobbs, B. S., Topeka, Kan. Housewife.
Ellsworth Thomas Martin, B. S., LL. B., Chicago, Ill. Lawyer.
Silas C. Mason, M. S., Berea, Ky. Professor of horticulture and biology, Berea College.
Wilton L. Morse, B. S., Mancos, Colo. Farmer.
Albert E. Newman, B. S., Watonga, O. T. County superintendent and editor.
Julia R. Pearce, B. S., San Francisco, Cal. Journalist.
Emil C. Pfuetze, B. S., Burlington, Kan. Superintendent of water-works.
William H. Sanders, B. S., Mangona, Fla. Plumber and builder.
Emma Secrest, B. S. Died in 1898.
Marie Barbara Senn, M. S., Fargo, N. D. Instructor in domestic economy, State Agricultural College.
Ralph Snyder, B. S., Oskaloosa, Kan. Farmer and teacher.
George E. Stoker, B. S., A. B., Topeka, Kan. Lawyer.
Walter T. Swingle, M. S. Travelling in Europe for division of vegetable pathology, U. S. department of agriculture.
Gilbert J. Van Zile, B. S., Carthage, Ill. Lawyer.
Harry N. Whitford, B. S. Chicago, Ill. Student in University of Chicago.
Thomas E. Wimer, B. S. Died in 1890.

1891.

William Aaron Anderson, Leonardville, Kan. Bookkeeper.
William Sherman Arbuthnot, B. S., D. V. S., Republic, Kan. Veterinary surgeon and druggist.
Herman William Avery, B. S., Wakefield, Kan. Farmer and merchant.
Judd Noble Bridgman, M. S., Atchison, Kan. Bicycle dealer.
Robert James Brock, B. S., Manhattan, Kan. Lawyer.
Francis Charles Burtis, M. S., Manhattan, Kan. Assistant in agriculture, Experiment Station, Kansas State Agricultural College.
Charles Albert Campbell, B. S., Providence, R. I. Minister.
Spencer Norman Chaffee, B. S., Riley, Kan. Teacher.
Ephraim Clay Coburn, B. S., Kansas City, Kan. Student of medicine.
Gertrude Coburn, B. S., Ames, Iowa. Professor of household economy, Iowa State Agricultural College.
Tina Louise Coburn, B. S., Topeka, Kan. Clerk in office of secretary of the state board of agriculture.
Rachel Callie (Conwell) Thoburn, B. S., Denver, Colo. Housewife.
Christine Mossman Corlett, B. S., Guthrie, O. T. Teacher.
Mary Emmeline (Cottrell) Payne, M. S., Cheyenne Wells, Colo. Housewife.
Phil Sheridan Creager, B. S., Kansas City, Mo. Editor.
Kary Cadmus Davis, B. S., Austin, Minn. Principal state high school.
Thomas Clarke Davis, B. S., Benedict, Kan. Farmer and member of legislature.
Helen Pearl (Dow) Peck, B. S., 756 Jefferson avenue, Brooklyn, N. Y. Housewife.
Anna (Fairchild) White, B. S., Cambridge, Mass. Housewife.
Harry Benson Gilstrap, B. S., Chandler, O. T. Editor and publisher.
Almon Arthur Gist, B. S., Fort Riley, Kan. Telegraph operator and station agent.
Amy Myrtle Harrington, B. S., Manhattan, Kan. Teacher.
Delpha May Hoop, B. S., Manhattan, Kan. Teacher.
Mayme Amelia (Houghton) Brock, B. S., Manhattan, Kan. Housewife.
Willis Wesley Hutto, B. S., Manhattan, Kan. Teacher.
George Victor Johnson, B. S., Sedan, Kan. Editor.
Frank Mullett Linscott, B. S., D. V. S., Holton, Kan. Stock-raiser.

Bessie Belle Little, B. S., Topeka, Kan. Teacher of physical culture.
Albert Edward Martin, B. S., Streator, Ill. Manager telephone company.
Nellie Evangeline (McDonald) Thayer, B. S., Lawrence, Kan. Housewife.
David Collins McDowell, B. S., Cripple Creek, Colo. Miner.
Alfred Midgley, B. S., Minneapolis, Kan. Clerk.
Madeleine Wade Milner, B. S., Chicago, Ill. Assistant librarian, Armour Institute.
Paul Chambers Milner, B. S., Chicago, Ill. Assistant exchange teller, Illinois Trust and Savings Bank.
Harry Elbridge Moore, B. S., Kansas City, Mo. Commission merchant.
John Otis Morse, B. S , Mound City, Kan. Farmer and teacher.
Hattie May Noyes, B. S., Wabaunsee, Kan. Teacher.
Louise Reed, B. S., San Diego, Cal. Principal of kindergarten.
Artemus Jackson Rudy, B. S., Fresno, Cal. Fruit-raiser.
Henry Vernon Rudy, B. S., Fresno, Cal. Fruit-raiser.
Charlotte Jane Short, M. S., Manhattan, Kan. Assistant in household economics, Kansas State Agricultural College.
Ben Skinner, B. S., M. D., Granada, Kan. Physician.
Caroline Scott (Stingley) Van Blarcom, B. S., Kansas City, Kan. Housewife.
Lillian Alice St. John, B. S., Manhattan, Kan. Teacher.
Ellis Cheney Thayer, B. S., Lawrence, Kan. Teacher, Haskell Institute.
Sam L. Van Blarcom, B. S., Kansas City, Kan. Railway postal clerk.
Frank Albert Waugh, M. S., Burlington, Vt. Professor of horticulture in Vermont University.
Fannie Elizabeth (Waugh) Davis, B. S., Austin, Minn. Housewife.
Flora Emilie Wiest, B. S., Manhattan, Kan. Teacher.
Bertha (Winchip) Spilman, B. S., Washington, D. C. Housewife.
Alfred Orin Wright, B. S., Lake Arthur, La. Editor.
Effie Jeanetta Zimmerman, M. S., Moray, Kan. At home.

1892.

Grace Maria Clark, M. S., Manhattan, Kan. At home.
George L. Clothier, B. S., Manhattan, Kan. Assistant in botany, Experiment Station, Kansas State Agricultural College.
Lillian Clyde Criner, B. S., McPherson, Kan. Soldier, Kansas volunteers.
Harry Darnell, B. S., Gardner, Kan. Teacher.
William H. Edelblute, B. S., Manhattan, Kan. Farmer.
Elizabeth Edwards, B. S., Randolph, Kan. Teacher.
John Frost, B. S., Blue Rapids, Kan. Teacher.
Effie (Gilstrap) Frazier, B. S., Chandler, O. T. Editor and publisher.
Ava (Hamill) Tillotson, B. S., Hill City, Kan. Housewife, and postgraduate student, Kansas State Agricultural College.
J N Harner, B. S. Died in 1897.
Loyall S. Harner, B. S., Junction City, Kan. Farmer.
Charles Pinckney Hartley, B. S., Manhattan, Kan. Postgraduate student and instructor, Kansas State Agricultural College.
John William Abraham Hartley, B. S., Manhattan, Kan. Teacher.
James Laird McDowell, B. S., Cripple Creek, Colo. Miner.
Robert A. McIlvaine, B. S., Emporia, Kan. Student, State Normal School.
Kate (Oldham) Sisson, B. S., Chicago, Ill. Housewife.
Daniel Henry Otis, M. S., Manhattan, Kan. Assistant in agriculture, Experiment Station, Kansas State Agricultural College.
Ivan Bryan Parker, B. S., M. D., Hill City, Kan. Physician.
Warner S. Pope, B. S., Kansas City, Kan. Lawyer.
Burton Homer Pugh, B. S., Oakland, Kan. Farmer.
Elias W. Reed, B. S., Avoca, Kan. Farmer.
Robert Stirling Reed, B. S., Emporia, Kan. Student, State Normal School.
Arthur Daniel Rice, B. S., Lamar, Colo. Minister.
Fred. C. Sears, M. S., Wolfville, Nova Scotia. Director of provincial school of horticulture.
Birdie E. Secrest, B. S., Randolph, Kan. Clerk.
May Secrest, B. S., San Francisco, Cal. Teacher, postgraduate student, and student artist.
Ruth Tipton (Stokes) Sears, M. S., Wolfville, Nova Scotia. Housewife.
Harry W. Stone, B. S., Portland, Ore. General secretary Y. M. C. A.
Walter Percival Tucker, B. S., Ben Davis, Ind. Student.
Mary Alice (Vail) Waugh, B. S., Burlington, Vt. Housewife.
Robert Lynn Wallis, B. S. Died in 1895.
Ora Rebecca (Wells) Traxler, B. S., Waterville, Kan. Housewife.

Daniel F. Wickman, B. S., Topeka, Kan. Market-gardener and clerk in Santa Fe offices.
George Washington Wildin, B. S., Topeka, Kan. In Santa Fe shops.
Charles Ernest Yeoman, B. S., La Crosse, Kan.

1893.

Edmund Clarence Abbott, B. S., Trinidad, Colo. Lawyer.
Edwin McMaster Stanton Curtis, B. S., Detroit, Mich. Clerk in railroad office.
Corinne Louise (Daly) Burtis, B. S., Manhattan, Kan. Housewife.
Laura Greeley Day, B. S., Menominee, Wis. Instructor in household economy, Stout Manual Training School.
Ione (Dewey) Sutherland, B. S., Manhattan, Kan. Housewife.
Albert Dickens, B. S., Bushton, Kan. Teacher.
Mary Maud Gardiner, M. S., Manhattan, Kan. Dressmaking.
Susie (Hall) Linscott, B. S., Holton, Kan. Housewife.
Mary Frances Burgoyne Harman, B. S., Olathe, Kan. Teacher, deaf and dumb asylum.
Ivy Frances Harner, M. S., Ruston, La. Teacher of domestic economy, Louisiana State Institute.
Margaretha Elise Horn, B. S., Dr. O., Detroit, Mich. Teacher of sciences, Detroit high school.
Marcia Ione Hulett, B. S., Kirksville, Mo. Student, school of osteopathy.
Mac F. Hulett, B. S., Kirksville, Mo. Teacher, school of osteopathy.
Fred Hulse, B. S., Manhattan, Kan. Teamster, Kansas State Agricultural College farm.
Charles Augustus Kimball, B. S., Scandia, Kan. Publisher.
Maud Ethel Knickerbocker, B. S., Terraville, S. D. Teacher.
Thomas Eddy Lyon, B. S., Ann Arbor. Student of law.
William Otis Lyon, B. S., Emporia, Kan. Teacher.
McLeod Wilson McCrea, B. S., Bostwick, Neb. Teacher.
Rose Edith McDowell, B. S., Manhattan, Kan. At home.
George Lane Melton, B. S., Winfield, Kan. Insurance and loan agent.
Eusebia DeLong Mudge, B. S., Eskridge, Kan. Bookkeeper.
Nora (Newell) Hatch, B. S., Manhattan, Kan. Housewife.
August Fred. Niemoller, B. S., Stitt, Kan. Teacher.
Susie Amanda Noyes, B. S. Died in 1894.
Henry Leamer Pellett, B. S., Kirksville, Mo. Student, school of osteopathy.
Charles John Peterson, B. S., Randolph, Kan. Teacher.
Carl Frederic Pfuetze, B. S., Kansas City, Mo. Railway postal clerk.
John Dewitt Riddell, B. S., M. D., Enterprise, Kan. Physician.
John Albert Rokes, B. S., Holton, Kan. Lawyer.
Agnes (Romick) Edgar, B. S., Halford, Kan. Housewife.
Fred. Raymond Smith, B. S., Manhattan, Kan. Lawyer.
George Wildman Smith, B. S., Minneapolis, Kan. Principal of high school.
William Elmer Smith, B. S., Manhattan, Kan. Teacher.
John Eugene Thackrey, B. S., Chapman, Kan. Minister.
Joseph B. Thoburn, B. S., Denver, Colo. Irrigation farmer and horticulturist.
Charles Henry Thompson, Columbia, Mo. Instructor in botany, State University.
George K. Thompson, B. S., Blue Rapids, Kan. Editor.
William James Yeoman, B. S., Kinsley, Kan. Principal of schools.

1894.

Frank Weber Ames, B. S., Chicago, Ill. Life insurance.
Clara Francelia Castle, M. S., Manhattan, Kan. At home.
George Luther Christensen, B. S., Providence, R. I. Manufacturer.
John Cornelius Christensen, B. S., Mariadahl, Kan. Farmer.
Lorena Estella Clemons, B. S., Manhattan, Kan. Clerk in Secretary's office, Kansas State Agricultural College.
Martha Cottrell, B. S., Wabaunsee, Kan. At home.
Sarah Esther (Cottrell) Wright, B. S., Jennings, La. Housewife.
Alverta May Cress, B. S., Manhattan, Kan. Clerk in office of register of deeds.
Fannie Jane Cress, B. S., Dayton, Ohio. Teacher.
Ernest A. Donaven, B. S., M. D., Goodrich, Kan. Physician.
Jephthah W. Evans, B. S., Junction City, Kan. Teacher high school.
Isabelle Russell Frisbie, B. S., Brookings, S. D. Professor of domestic economy, State Agricultural College.
Eugene Leonard Frowe, B. S. Died in 1898.
Walter Harling, B. S., Echo, Utah. Teacher.
Lorena Marguerite Helder, B. S., Manhattan, Kan. Assistant in music, Kansas State Agricultural College.

Mark V. Hester, B. S., Lawrence, Kan. Student, State University.
Charles Ross Hutchings, B. S., Pomona, Kan. County surveyor.
Isaac Jones, jr., B. S. Klondike, Alaska. Miner.
Stella Victoria Kimball, B. S., Manhattan, Kan. Teacher.
Mary Eliza Lyman, B. S., Peoria, Ill. Assistant in household economy, Bradley Polytechnic Institute.
William Henry Moore, B. S., Manhattan, Kan. Horticulturist and postgraduate student, Kansas State Agricultural College.
Sarah (Moore) Foster, B. S., Mont Ida, Kan. Housewife.
James Francis Odle, B. S., Monaca, Pa. Superintendent dairy farm.
Charles Randolph Pearson, B. S., Hoxie, Kan. Teacher.
Horace Greeley Pope, B. S., Kansas City, Mo. Lawyer.
Minnie Louisa Romick, B. S., Niles, Kan. Teacher.
Winnie Luella (Romick) Chandler, B. S., Argentine, Kan. Housewife.
Victor Irvin Sandt, B. S., Home, Kan. Teacher.
John Alfred Scheel, B. S., Klondike, Alaska. Miner.
Jacob Ulrich Secrest, B. S., Randolph, Kan. Farmer.
Charles Chrisfield Smith, B. S., Wabaunsee, Kan. Principal of schools.
Jennie Ruth Smith, B. S., Topeka, Kan. Student, Washburn College.
Wesley Ohio Staver, B. S., Kansas City, Mo. Lawyer.
John Stingley, B. S., Olathe, Kan. Teacher, deaf and dumb asylum.
John Edwin Taylor, B. S. Died in 1896.
Delbert L. Timbers, B. S., Beloit, Kan. Teacher.
Phebe Carey Turner, B. S., Maple Hill, Kan. Teacher.
Samuel Robert Vincent, B. S., Manhattan, Kan. Postgraduate student and student assistant, Kansas State Agricultural College.
Lucy Helena Waters, B. S., Manhattan, Kan. Teacher.

1895.

Edward Jones Abell, B. S., Smith Center, Kan. Principal of schools.
Carl D. Adams, B. S., Olathe, Kan. Teacher, asylum for deaf and dumb.
Robert John Barnett, B. S., Leonardville, Kan. Teacher.
Burton Wesley Conrad, B. S., Capioma, Kan. Farmer.
Florence Ruth Corbett, B. S., Manhattan, Kan. Postgraduate student and assistant.
Sid Henry Creager, B. S., Kansas City, Mo. Journalist.
Elsie Emeline Crump, B. S., Manhattan, Kan. Teacher.
David Thomas Davies, B. S., Manhattan, Kan. Farmer.
Frank Andrew Dawley, B. S., Waldo, Kan. County clerk.
Daisy Day, M. S., Manhattan, Kan. At home.
Flora Day, B. S., Manhattan, Kan. At home.
George Adam Dean. B. S., Topeka, Kan. Farmer.
Lillie Christena Dial, B. S., Cleburne, Kan. Teacher.
Lucy Ellis, B. S., Topeka, Kan. Teacher.
Victor Emrick, B. S., Portland, Ore. Teacher.
George Forsyth, B. S., Franklin, Ind. Agent.
Ernest Harrison Freeman, B. S., Topeka, Kan.
Florence Eleanor Fryhofer, B. S., Randolph, Kan. At home.
George William Fryhofer, B. S., Chicago, Ill. Student, Kent Law School.
Oscar Hugo Halstead, B. S., ———, Sweden. Special student.
Hortensia (Harman) Patten, B. S., Sycamore, Ill. Housewife.
John Bright Harman, Valley Falls, Kan. Farmer.
Clarence V. Holsinger, B. S., Rosedale, Kan. Fruit-raiser.
Christian Andrick Johnson, B. S., St. Louis, Mo. Medical student.
John James Johnson, B. S., St. Louis, Mo. Medical student.
Fred. Ralph Jolly, B. S., Manhattan, Kan. Newspaper reporter.
William Irvin Joss, B. S., Fairview, Kan. Teacher.
Maud Estella Kennett, B. S., Silver Lake, Kan. Teacher.
Myron Arthur Limbocker, B. S., Kansas City, Kan. Lawyer.
Samuel Alexander McDowell, B. S., Manhattan, Kan. Clerk.
Laura Sarah (McKeen) Smith, B. S., Russell, Kan. Housewife.
Theo. Wattles Morse, M. S., Kansas City, Mo. Journalist.
Oscar Albert Otten, B. S., Pierce Junction, Kan. Telegraph operator.
William Hackworth Painter, B. S., Meade, Kan. Farmer.
Charles Wesley Pape, B. S., Manhattan, Kan. Assistant in zoology, Kansas State Agricultural College.
Ethel Patten, B. S., Silver Lake, Kan. Teacher.

John Vernon Patten, B. S., Sycamore, Ill. Manufacturer.
William H. Phipps, B. S., Belleville, Kan. Manager creamery.
Alice Julia (Quintard) Peck, B. S., Dallas, Texas. Housewife.
Frederick Ellsworth Rader, B. S., Manhattan, Kan. Teacher.
Ralph Waldo Rader, B. S., Manhattan, Kan. Farmer.
Ada Rice, B. S., Randolph, Kan. Teacher.
Benjamin Franklin Simeon Royer, B. S., St. Joseph, Mo. Physician.
Charles Baxter Selby, B. S., Marion, Va. Lawyer.
Mabel Gertrude Selby, B. S., Enid, O. T. Teacher.
Ernest P. Smith, B. S., Belleville, Kan. Creamery.
Frederick John Smith, B. S., Russell, Kan. Editor.
Kitty Myrtle Smith, B. S., Manhattan, Kan. At home.
Marietta Smith, B. S., Topeka, Kan. Student, Washburn College.
William Henry Steuart, B. S., Victor, Colo. Mining engineer.
Cora Idella Stump, B. S., Manhattan, Kan. Teacher.
Dora (Thompson) Winter, B. S., Blue Rapids, Kan. Housewife.
Elven Creveling Trembly, B. S., Comiskey, Kan. Farmer.
George Carpenter Wheeler, B. S., Boston, Mass. Railroad conductor.
Mary Elizabeth (Willard) Emrick, B. S., Portland, Ore. Housewife.
Olive Mabel (Wilson) Holsinger, B. S., Rosedale, Kan. Housewife.
Ora Gertrude Yenawine, B. S., Manhattan, Kan. Postgraduate student.

1896.

May Haines Bowen, B. S., Topeka, Kan. Student, Washburn College.
Con Morrison Buck, B. S., Manhattan, Kan. Postgraduate student and assistant in graphics, Kansas State Agricultural College.
Margaret Isaphene (Carlton) Doane, B. S., Milwaukee, Wis. Housewife.
William Annesley Cavenaugh, B. S., Fort Leavenworth, Kan. In United States army.
William Arthur Coe, B. S., Coloma, Kan. Farmer.
Charlotte Mabel (Cotton) Smith, B. S., Belleville, Kan. Housewife.
Ernest Brown Coulson, B. S., Anthony, Kan. Deputy in county clerk's office.
George Henry Dial, B. S., Cleburne, Kan. Teacher and farmer.
Charles Francis Doane, B. S., Milwaukee, Wis. Agricultural editor.
John Berthold Dorman, B. S., Greenfield, N. Y. Teacher.
Bradford Dougherty, B. S., Kansas City, Kan. Collector.
Charles Silar Evans, B. S., La Junta, Colo. Hospital steward.
Robert Kilby Farrar, B. S., Axtell, Kan. Teacher.
George William Finley, B. S., Manhattan, Kan. Teacher.
Joanna Freeman, B. S. Died in 1897.
John Jacob Fryhofer, B. S., Randolph, Kan. Farmer.
Elmer George Gibson, B. S., Willard, Kan. Teacher.
George Clifton Hall, B. S., Manhattan, Kan. Teacher and law student.
Alonzo Charles Havens, B. S., Dwight, Kan. Farmer.
Gertrude Julia (Havens) Norton, B. S., St. Louis, Mo. Housewife.
Lawrence Wilbur Hayes, B. S., Topeka, Kan. Attendant, asylum for insane.
John Warren Holland, B. S., Pocatello, Idaho.
Henry George Johnson, B. S., Chicago, Ill. Student in dentistry.
Susan Effie (Johnson) Cooper, B. S., Success, Kan. Housewife.
Marion Elizabeth Jones, B. S., Manhattan, Kan. Teacher.
Thomas Lormar Jones, B. S., Manhattan, Kan. Farmer.
Edward Clarence Joss, B. S., Fairview, Kan. Merchant.
Royal S. Kellogg, B. S., Manhattan, Kan. Postgraduate assistant.
Mark Kirkpatrick, B. S., Antlers, I. T. Army officer.
Edith Lynette Lantz, B. S., Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.
Sue Long, B. S., Manhattan, Kan. Local editor.
Charles W. Lyman, B. S., Junction City, Kan. Merchant.
Charles Dwin McCauley, B. S., Topeka, Kan. Farmer.
Charles Sumner Marty, B. S., Merriam, Kan. Farmer.
Mrs. Elda Lenore Moore, B. S., Manhattan, Kan. Housewife.
Arthur Houston Morgan, B. S., Hillside, Kan. Farmer and teacher.
Clara Verena Newell, B. S., Manhattan, Kan. Clerk.
Ellen Elizabeth Norton, B. S., Manhattan, Kan. At home.
John Bitting Smith Norton, B. S., St. Louis, Mo. Assistant in Missouri botanical garden.
Hattie A. Paddleford, B. S., Randolph, Kan. Teacher.

Mary Kerilla Painter, B. S., Meade, Kan. Teacher.
Elva Luthera (Palmer) Thackrey, B. S., Chapman, Kan. Housewife.
Inez Luella (Palmer) Barrows, B. S., Washington, Kan. Housewife.
Fannie Parkinson, B. S., Pomona, Kan. Teacher.
Archie Carpenter Peck, B. S., Dallas, Tex. Manager and proprietor of cotton-gin.
Arthur Louis Peter, B. S., Denver, Colo. Student, medical college.
Charles Edwin Pincomb, B. S., Hector, Kan. Farmer.
Mary Josephine Pincomb, B. S., Hector, Kan. At home.
John Poole, B. S., Briggs, Kan. Farmer.
Edgar Arthur Powell, B. S., Osage City, Kan. Farmer.
Lisle Willets Pursel, B. S. Postgraduate student, Kansas State Agricultural College.
Howard Newton Rhodes, B. S. Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.
Ambrose Elliott Ridenour, B. S., Manhattan, Kan. Student of law.
Mary Etta Ridenour, B. S., Manhattan, Kan. At home.
Isaac Archie Robertson, B. S., St. Louis, Mo. Railroad clerk.
Grace Anna Secrest, B. S., Randolph, Kan. Teacher.
Carl Snyder, B. S., Oskaloosa, Kan. Farmer.
Max Gilbert Spalding, B. S., Wichita, Kan. Packing-house.
Orville Ashford Stingley, B. S., Manhattan, Kan. Laundry.
Sadie Stingley, B. S., Manhattan, Kan. Teacher.
Gertrude Ella Stump, B. S., Manhattan, Kan. At home.
Miriam Esther Swingle, B. S., Washington, D. C. Student.
William Elwood Thackrey, B. S., Moffat, Colo. Stock-raiser.
James Dunbar Trumbull, B. S., Manhattan, Kan. Clerk.
Frank Edwin Uhl, B. S., Gardner, Kan. Farmer.
Edwin H. Webster, B. S., Denver, Colo. Teacher of mechanical industry.

1897.

Cora Atwell, B. S., Manhattan, Kan. Teacher.
Roger William Bishoff, B. S., Eudora, Kan. Farmer.
Mary Frances Carnell, B. S., Bunker Hill, Kan. At home.
William Burns Chase, B. S., Hoyt, Kan. Merchant.
Frank E. Cheadle, B. S., Erwin, O. T. Farmer.
Robert Waitman Clothier, B. S., Manhattan, Kan. Postgraduate student and assistant in chemistry, Kansas State Agricultural College.
Maggie A. (Correll) Uhl, B. S., Gardner, Kan. Housewife.
Mabel Crump, B. S., Manhattan, Kan. Telephone operator.
Fred Volley Dial, B. S., Cleburne, Kan. Clerk.
Viola Grace Dille, B. S., Edgerton, Kan. Teacher.
Samuel Dolby, B. S., Longford, Kan. Postgraduate student, Kansas State Agricultural College, and farmer.
George Doll, B. S., Larned, Kan. Teacher.
Anna Phillipina Engel, B. S., Manhattan, Kan. At home.
Emma Finley, B. S., Emporia, Kan. Student, State Normal School.
Martha Fox, B. S., Manhattan, Kan. At home.
Philip Fox, B. S., Manhattan, Kan. Postgraduate student and student assistant, Kansas State Agricultural College.
Ned Merrill Green, B. S., Kansas City, Mo. Soldier, Missouri volunteers.
Mary Eliza Haulenbeck, B. S., Manhattan, Kan. At home.
Lewellyn Gaines Hepworth, B. S., Burlington, Kan. Teacher and farmer.
Ina Emma Holroyd, B. S., Emporia, Kan. Student, State Normal School.
Myrtle Hattie Hood, B. S., Manhattan, Kan. At home.
Charles Henry Hoop, B. S., Manhattan, Kan. Clerk.
Winfred Anna Houghton, B. S., Manhattan, Kan. Teacher.
Bret Redmon Hull, B. S., Alta Vista, Kan. Lumber dealer.
Clay Berkey Ingman, B. S., Barnes, Kan. Farmer.
Gertrude May Lyman, B. S., Manhattan, Kan. Teacher.
Frederick Hugo Meyer, B. S., Madison, Wis. Student, Rose Polytechnic Institute.
Valentine Maelzer, B. S., Neuchatel, Kan. Farmer.
Sherman Bodwell Newell, B. S., Zeandale, Kan. Teacher and farmer.
Oliver Ezra Noble, B. S., Manhattan, Kan. County surveyor, and postgraduate student, Kansas State Agricultural College.
Jesse Baker Norton, B. S., Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.

Mary Augusta Norton, B. S., Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.
Bertha Olivia Olson, B. S., Manhattan, Kan. At home.
Hilda Sophia Olson, B. S., Manhattan, Kan. At home.
Russell John Peck, B. S., Dallas, Tex.
William Oscar Peterson, B. S., Randolph, Kan. Teacher.
Eva Louise Philbrook, B. S., Emporia, Kan. Student, State Normal School.
Rufus M. Philbrook, B. S., Emporia, Kan. Student, State Normal School.
William Joseph Rhoades, B. S., Kansas City, Kan. Greenhouse.
Carl Rice, B. S., Manhattan, Kan.
Thomas Meade Robertson, B. S., Kansas City, Mo. Journalist.
Homer Joseph Robison, B. S., Topeka, Kan. Machinist.
Edward Shellenbaum, B. S., Randolph, Kan. Teacher.
Alice Myrtle Shofe, B. S., Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.
Charles Wesley Shull, B. S., Manhattan, Kan. Teacher.
Alfred Caleb Smith, B. S., Berkeley, Cal. Student, State University.
Phœbe Jane Smith, B. S., Emporia, Kan. Student, State Normal School.
Wilhelmina Henrietta Spohr, B. S., Manhattan, Kan. Teacher.
Charles Harrison Stokely, B. S., Burlingame, Kan. Teacher.
John E. Trembly, B. S., Comiskey, Kan. Farmer.
Harriet Agnes Vandivert, B. S., Bethany, Mo. At home.
Olive Voiles, B. S., Manhattan, Kan. At home.
John Minton Westgate, B. S., Westgate, Kan. Postgraduate student and student assistant, Kansas State Agricultural College.
Mark Wheeler, B. S., Lawrence, Kan. Student, State University.
Clare Annie Wilson, B. S., Mapleton, Kan. Teacher.

SUMMARY.

The number of graduates up to 1898 is 574, of whom 200 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of bachelor of arts. Since 1877, all have received the degree of bachelor of science, after a four years' course in the sciences, with good English training.

Of the 374 men, 10 are deceased, and the remainder are reported in the following occupations:

Farmers and stock-raisers	62
Fruit-growers, nurserymen, and gardeners	11
Professors and instructors in agricultural colleges	8
President of polytechnic institute	1
College professors not otherwise classified	2
Superintendent of agricultural experiment station	1
Assistants in agricultural experiment stations	5
In United States department of agriculture	3
Assistant in botanical garden	1
In military service	6
In United States government civil service	6
Teachers and students of special sciences	5
Superintendents of public schools	14
Teachers in public schools	55
Teachers in Indian schools	3
Postgraduate students in K. S. A. C	13
Students in other institutions	9
Mechanics	8
Journalists	27
Ministers and secretary of Y. M. C. A	13
Physicians and students of medicine, druggists, and dentists	17
Lawyers and students of law	30
Civil, electrical, mining and mechanical engineers	8
Architects and builders	4
Other professional men	3
Manufacturers	11

Merchants	21
Bankers	4
General business men	15
Telegraph operators and railroad agents	6
Officials and official clerks	12
Miners	6
Unknown	6
Total	396
In two occupations	32
	364

Of the 200 women, 7 are deceased, and the remainder occupied as follows:

Housewives	73
At home	23
Teachers of household economy	11
Teachers in public schools	40
Teachers and students of special sciences	5
Teachers of art and music	5
Bookkeepers, stenographers, and clerks	10
Milliners and dressmakers	3
Librarians	1
Nurses	2
Postgraduates in K. S. A. C	8
Students in other institutions	9
Journalists	3
Unknown	1
Total	194
In two occupations	1
	193

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THIRTY-SIXTH ANNUAL CATALOGUE

OF THE

Officers, Students and Graduates

OF THE

KANSAS STATE
Agricultural College

MANHATTAN,

1898-1899.

AND ANNOUNCEMENTS FOR

1899-1900.

W. Y. MORGAN, STATE PRINTER,
TOPEKA, KAN.
1899.

Terms and Vacations.

Fall Term, 1899, Thirteen Weeks.

WEDNESDAY, SEPTEMBER 13.—Examination for admission, at 9 A. M.
THURSDAY, SEPTEMBER 14.—College year begins.
TUESDAY, SEPTEMBER 19.—Short course in domestic science begins.
SATURDAY, OCTOBER 28.—Examination.
SATURDAY, DECEMBER 2.—Annual exhibition of the Alpha Beta Society.
THURSDAY AND FRIDAY, DECEMBER 14, 15.—Examination at close of fall term.
DECEMBER 16 TO JANUARY 2.—Winter vacation.

Winter Term, 1900, Twelve Weeks.

TUESDAY, JANUARY 2.—Examination for admission, at 9 A. M.
WEDNESDAY, JANUARY 3.—Winter term begins.
WEDNESDAY, JANUARY 3.—Short courses in agriculture, horticulture and dairying begin.
SATURDAY, JANUARY 27.—Annual exhibition of the Hamilton Society.
SATURDAY, FEBRUARY 10.—Examination.
SATURDAY, MARCH 10.—Annual exhibition of the Webster Society.
THURSDAY AND FRIDAY, MARCH 22, 23.—Examination at close of winter term.

Spring Term, 1900, Eleven Weeks.

MONDAY, MARCH 26.—Examination for admission, at 9 A. M.
TUESDAY, MARCH 27.—Spring term begins.
SATURDAY, APRIL 21.—Annual exhibition of the Ionian Society.
SATURDAY, MAY 5.—Examination.
TUESDAY AND WEDNESDAY, JUNE 12, 13.—Examination at close of year.
JUNE 10 TO 14.—Exercises of Commencement week.
THURSDAY, JUNE 14, AT 10:30 A. M.—Commencement.
JUNE 15 TO SEPTEMBER 19.—Summer vacation.

Fall Term, 1900.

WEDNESDAY, SEPTEMBER 19.—Examination for admission, at 9 A. M.
THURSDAY, SEPTEMBER 20.—College year begins.

Board of Regents.

Hon. E. T. FAIRCHILD (1903)*, *President*,
Ellsworth, Ellsworth county.

Hon. J. S. McDOWELL (1901), *Vice-President*,
Smith Center, Smith county.

Hon. W. T. YOE (1901), *Treasurer*,
Independence, Montgomery county.

Hon. WM. HUNTER (1903), *Loan Commissioner*,
Blue Rapids, Marshall county.

Hon. Mrs. SUSAN J. ST. JOHN (1901),
Olathe, Johnson county.

Hon. CARL VROOMAN (1901),
Parsons, Labette county.

Hon. J. M. SATTERTHWAITE (1903),
Douglass, Butler county.

Acting Pres. E. R. NICHOLS (*ex officio*), *Secretary*.

Miss LORENA E. CLEMONS, *Assistant Secretary*,
Manhattan.

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* Term expires.

30720

Board of Instruction, 1898-'99.

FACULTY.

THOMAS ELMER WILL, A. M. (*Harvard*), President,
Professor of Economics and Philosophy.

WM. H. PHIPPS, B. S. (*Kansas State Agricultural College*), Secretary,
Professor of Bookkeeping, Commercial Law, and Accounts. (After February 20, 1899.)

HENRY M. COTTRELL, M. S. (*Kansas State Agricultural College*),
Professor of Agriculture, Superintendent of Farm.

ALBERT S. HITCHCOCK, M. S. (*Iowa State Agricultural College*),
Professor of Botany.

JULIUS T. WILLARD, M. S. (*Kansas State Agricultural College*),
Professor of Applied Chemistry.

GEORGE F. WEIDA, Ph. D. (*Johns Hopkins*),
Professor of Pure Chemistry.

EDWARD W. BEMIS, Ph. D. (*Johns Hopkins*),
Professor of Economic Science.

DUREN J. H. WARD, Ph. D. (*Leipsic*),
Professor of English Language and Literature.

ARNOLD EMCH, Ph. D. (*University of Kansas*),
Professor of Graphic Mathematics.

FRANK PARSONS, B. C. E. (*Cornell University*),
Professor of History and Political Science.

E. E. FAVILLE, M. S. A. (*Iowa State Agricultural College*),
Professor of Horticulture and Entomology, Superintendent of Orchards and Gardens.
(Until January 1, 1899.)

Miss MINNIE E. STONER, B. S. (*South Dakota Agricultural College*),
Professor of Household Economics, Superintendent of Domestic Science Departments.

JOHN D. WALTERS, M. S. (*Kansas State Agricultural College*),
Professor of Industrial Art and Designing.

Miss MARY F. WINSTON, Ph. D. (*Goettingen*),
Professor of Mathematics.

JOSEPH D. HARPER, M. S. (*Rose Polytechnic*),
Professor of Mechanics and Engineering, Superintendent of Workshops.

ALEXANDER B. BROWN, (*Boston Music School*), A. M. (*Olivet*),
Professor of Music.

FREDRIC AUGUSTUS METCALF, O. M. (*Emerson College of Oratory*),
Professor of Oratory.

ERNEST R. NICHOLS, D. B. (*Iowa State Normal School*), A. M. (*State University of Iowa*),
Professor of Physics.

PAUL FISCHER, B. Agr., M. V. D. (*Ohio State University*),
Professor of Veterinary Science.

CHARLES S. DAVIS (*Kansas State Normal School*),
Superintendent of Printing.

Miss HARRIET HOWELL (*Pratt Institute*),
Superintendent of Sewing.

Miss ALICE RUPP,
Instructor in English.

Miss JOSEPHINE C. HARPER,
Instructor in Mathematics.

Miss HELEN J. WESCOTT,
Librarian.

Assistants and Foremen.

WILLIAM L. HOUSE,
Foreman of Carpenter Shop.

R. W. CLOTHIER, M. S.,
Assistant in Chemistry.

WILLIAM H. MOORE, M. S.,
Foreman of Greenhouse.

CHARLOTTE J. SHORT, M. S.,
Assistant in Household Economics.

Mrs. MARY L. HANSON,
Superintendent of Dining Hall.

ENOS HARROLD,
Foreman of Iron Shop.

MARGARET J. MINIS,
Assistant Librarian.

CHARLES W. PAPE, B. S.,
Assistant Curator of Museum.

LORENA M. HELDER, M. T., B. S.,
Assistant in Music.

Mrs. WINNIFREDE W. METCALF,
Assistant in Oratory.

J. D. RICKMAN, I. T. U.,
Foreman of Printing-office.

ORA G. YENAWINE, B. S.,
Assistant in Sewing.

R. B. MITCHELL,
Cadet Major and Acting Commandant

ROYAL S. KELLOGG, B. S.,
General Assistant.

J. M. WESTGATE, B. S.,
General Assistant.

S. N. CHAFFEE, B. S.,
Principal Preparatory Department.

Other Officers.

WILLIAM CANFIELD LEE, A. B.,
Private Secretary to President.

LORENA E. CLEMONS, B. S.,
Assistant Secretary.

OLIVE LONG, B. S.,
Clerk in Post-office.

JACOB LUND, M. S.,
Engineer.

EUGENE EMRICK,
Janitor.

Experiment Station Staff.

Council.

THOS. E. WILL, A. M., Chairman, *ex officio.*
H. M. COTTRELL, M. S., Agriculturist.
A. S. HITCHCOCK, M. S., Botanist.
J. T. WILLARD, M. S., Chemist.
E. E. FAVILLE, M. S. A.,* Horticulturist and Entomologist.
PAUL FISCHER, B. AGR., M. V. D., Veterinarian.

W. H. PHIPPS, B. S., Secretary.

Assistants.

F. C. BURTIS,† M. S., Assistant in Feeding and Field Work.
J. G. HANEY, B. S., Acting Assistant in Feeding and Field Work.
D. H. OTIS, M. S., Assistant in Dairying.
GEO. L. CLOTHIER, M. S., Assistant Botanist.
ROBT. W. CLOTHIER, M. S., Assistant Chemist.
PERCIVAL J. PARROTT,‡ A. M., Assistant Entomologist,
WM. L. HALL,§ M. S., Assistant Horticulturist.
CHAS. W. PAPE, Assistant in Veterinary Department.

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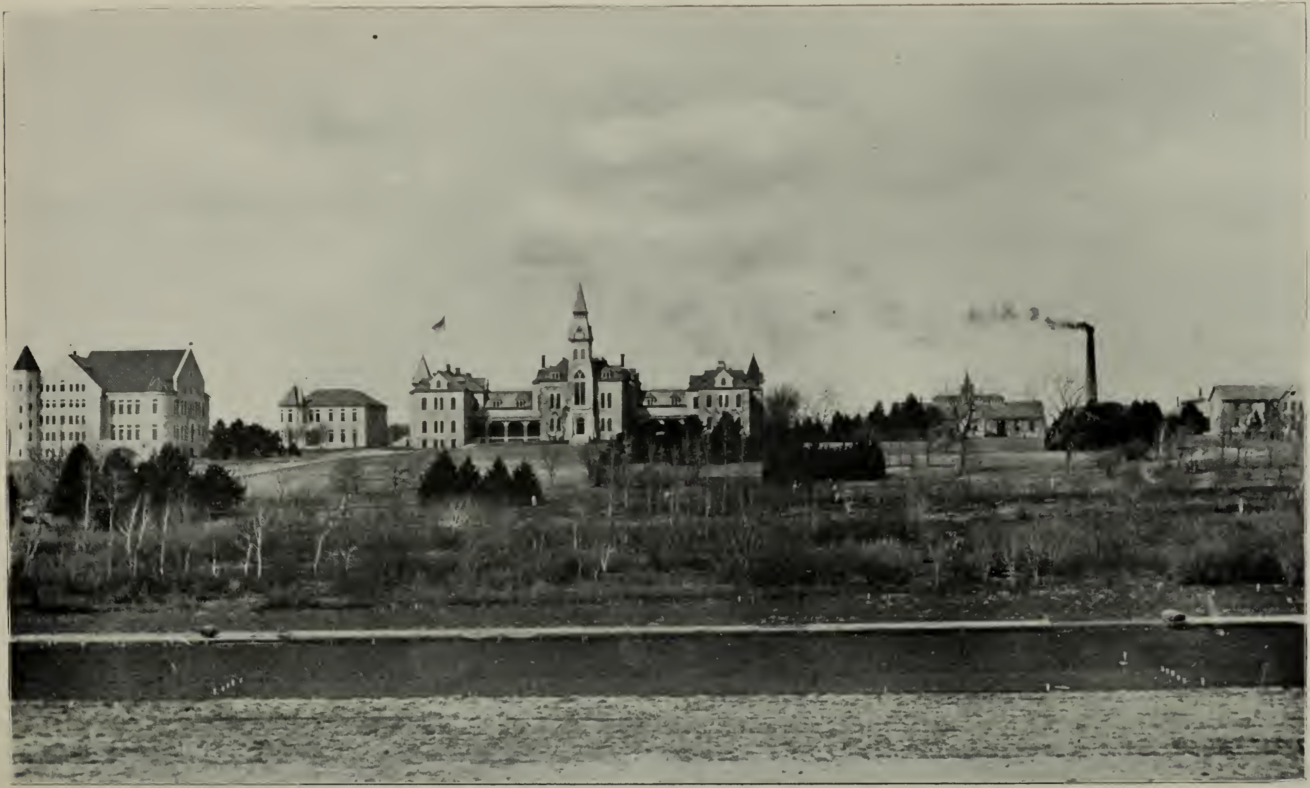
* Until January 1, 1899.
† Absent on leave since January, 1899.
‡ In charge of the entomological department since January, 1899.
§ In charge of the horticultural department since January, 1899.

Student Assistants.

BONNIE F. ADAMS, Library.
M. C. ADAMS, History and Political Science.
F. W. BOBBITT, Mechanics, Surveying.
R. H. BROWN, B. S., Music.
LOUISE BURNHAM, Library.
J. A. CONOVER, B. S., Dairying.
G. C. HALL, B. S., Arithmetic.
J. G. HANEY, Field and Feeding Experiments.
F. J. HOWARD, Gymnasium, Military.
L. B. JOLLEY, Library.
A. T. KINSLEY, Veterinary, Chemistry.
J. M. KESSLER, Horticulture.
ROSS LONG, United States History, Political Science, and Economics.
W. E. MATHEWSON, Chemistry.
R. B. MITCHELL, Major of Battalion.
R. T. NICHOLS, Horticulture.
MARY B. PRITNER, Chemistry.
VIOLET QUINT, B. S., Geography, Grammar.
D. W. RANDALL, Surveying.
GRACE SECREST, B. S., Library.
O. R. SMITH, B. S., Secretary's Office.
H. L. SNODGRASS, Algebra.
LOUISE SPOHR, Grammar.
D. B. SWINGLE, Botany.
MIRIAM SWINGLE, Grammar.
W. G. TULLOSS, Surveying.
ED. H. WEBSTER, B. S., Dairying, Bookkeeping.
J. M. WESTGATE, B. S., Botany, Surveying, Algebra.
A. D. WHIPPLE, B. S., English, Library.
ADELAIDE WILDER, B. S., Library.
F. O. WOESTEMEYER, Library.



GENERAL VIEW FROM EAST.

The College Battalion.

The following is the roster of the commissioned and non-commissioned officers of the College Battalion for 1898–'99:

ROBERT B. MITCHELL,
Major and Acting Commandant of Cadets.

STAFF.

CHARLES EASTMAN	First Lieutenant and Adjutant.
FLOYD HOWARD	First Lieutenant and Quartermaster.
R. E. EASTMAN	Sergeant-major.
H. S. BOURNE	Color-sergeant.
PAUL PIERSOL	Drum-major.
WAYNE RIDDLE	Chief Trumpeter.
R. H. BROWN	Principal Musician.

OFFICERS BY COMPANIES.

RANK.	"A" company.	"B" company.	"C" company.	"D" company.
Captains	A. E. Blair	F. S. Shelton	R. T. Nichols	J. A. Harvey.
First Lieutenants	L. E. Potter	H. D. Orr	R. McKee	A. I. Bain.
Second Lieutenants,	C. A. Scott	Geo. Greene	D. B. Swingle	G. W. Owens.
First Sergeants	H. F. Butterfield,	G. W. Hanson	W. F. Lawry	B. Thompson.
Second Sergeants	B. Poole	Jno. Powers	C. C. Turner	H. H. Riley.
Third Sergeants	E. C. Cook	B. F. Mudge	R. A. Bower	J. H. Oesterhaus.
Fourth Sergeants	E. V. Roe	C. R. Edwards	H. A. Avery	Fred Myers.
Fifth Sergeants	C. J. Burson	H. A. Dieball	J. T. Stafford	H. Adams.
First Corporals	D. C. Deming	F. W. Haselwood.	R. S. Cole	H. T. York.
Second Corporals	H. Baker	E. E. Chronister,	H. N. Vinall	C. Davidson.
Third Corporals	H. H. Fay	R. F. Triplet	C. F. Smith	C. A. Gingery.
Fourth Corporals	J. F. Ross	J. D. Hansen	E. H. Zirkle	J. E. Snyder.
Fifth Corporals	R. Faris	V. M. Emmert	C. D. Blachly	C. O. Sparks.
Sixth Corporals	L. Rigg	H. C. Williams	E. N. Rodell	H. P. Richards.

Students.

POSTGRADUATES.

NOTE.—Studies pursued during the year printed in italic.

CANDIDATES FOR MASTER'S DEGREE, 1899.

George L. Clothier, B. S. '92...........*Botany, Horticulture.*
Vera, Wabaunsee county.

Robert W. Clothier, B. S. '97..........*Chemistry, Agriculture.*
Vera, Wabaunsee county.

William Logan Hall, B. S. '98.... .....*Horticulture, Botany.*
Anthony, Harper county.

Charles Pickney Hartley, B. S. 92......*Horticulture, Entomology, Botany.*
Manhattan, Riley county.

Royal S. Kellogg, B. S. '96............ *Economics, Mathematics, Horticulture.*
Fay, Russell county.

John Minton Westgate, B. S. '97.......*Botany, Drawing, Mathematics.*
Westgate, Geary county.

NON-RESIDENT.

John Bitting Smith Norton, B. S. '96...*Botany, Horticulture.*
St. Louis, *Missouri.*

Raymond Haines Pond, B. S. '98.......*Botany, Horticulture.*
Ann Arbor, *Michigan.*

Fannie Elizabeth (Waugh) Davis, B.S.'91, *Botany, Drawing.*
Ithaca, *New York.*

IN COURSE LEADING TO MASTER'S DEGREE.

Samuel John Adams, B. S. '98.........*Oratory, General History, Music, Architecture, Economics.*
Marvin, Phillips county.

John Alfred Conover, B. S. '98.........*Agriculture, Bacteriology.*
Sabetha, Nemaha county.

Anna Phillipina Engel, B. S. '97.......*Household Economics, Botany, Drawing, German.*
Manhattan, Riley county.

George Clifton Hall, B. S. '96..........*Horticulture, Entomology, Oratory, Law.*
Mahattan, Riley county.

Jesse Baker Norton, B. S. '97...........*Botany, Drawing.*
Manhattan, Riley county.

Oliver Russell Smith, B. S. '98..........*Architecture, Graphics.*
Manhattan, Riley county.

Adelaide Frances Wilder, B. S. '98......*Designing, Household Economics.*
Manhattan, Riley county.

NON-RESIDENT.

David E. Bundy, B. S. '89..............*Horticulture, Entomology, Botany.*
Randolph, Riley county.

Charles Francis Doane, B. S. '96.......*Agriculture, Bacteriology.*
Milwaukee, *Wisconsin.*

John Martin Pierce, B. S. '98 .... *Horticulture, Botany.*
Healdsburg, *California.*

Willis Thomas Pope, B. S. '98 .... *Horticulture, Botany, Drawing.*
Eureka, Greenwood county.

Charles Wesley Shull, B. S. '97 .... *Economics, Agriculture.*
Manhattan, Riley county.

IN ADVANCED WORK NOT LEADING TO A DEGREE.

Cora Atwell, B. S. '97 .... *Household Economics, Oratory.*
Manhattan, Riley county.

Robert John Barnett, B. S. '95 .... *Physiology.*
Manhattan, Riley county.

Mary C. Bower, B. S. '83 .... *German, Household Economics.*
Manhattan, Riley county.

Spencer Norman Chaffee, B. S. '91 ...... *Literature.*
Riley, Riley county.

Florence Ruth Corbett, B. S. '95 .... *Household Economics, Botany.*
Manhattan, Riley county.

Flora (Day) Barnett, B. S. '95 .... *Household Economics.*
Manhattan, Riley county.

Martha Fox, B. S. '97 .... *Botany, History, Sewing.*
Manhattan, Riley county.

Mary Eliza Haulenbeck, B. S. '97 .... *Household Economics, Botany.*
Manhattan, Riley county.

Ina Emma Holroyd, B. S. '97 .... *Drawing.*
Manhattan, Riley county.

Henry Alba Martin, B. S. '98 .... *Bacteriology, Dairying.*
Junction City, (Riley county.)

Alice Maude Melton, B. S. '98 .... *Household Economics, Literature.*
Manhattan, Riley county.

Oliver Ezra Noble, B. S. '97 .... *Mechanics, Mathematics.*
Manhattan, Riley county.

Ellen Elizabeth Norton, B. S. '96 .... *Household Economics, Oratory, Literature.*
Manhattan, Riley county.

Lucy Junie Parks, B. S. '98 .... *History, Sewing.*
Manhattan, Riley county.

Clara Jeanette Perry, B. S. '98 .... *Household Economics.*
Manhattan, Riley county.

Violet U. Quint, B. S. (Iowa Ag. Coll.).. *Household Economics, Sewing.*
Lasita, Riley county.

Abner Davis Whipple, B. S. '98 .... *English, German.*
Olivet, Osage county.

Ora Gertrude Yenawine, B. S. '95 .... *Household Economics.*
Manhattan, Riley county.

NON-RESIDENT.

Thomas Walter Allison, B. S. '98 .... *Horticulture, Entomology.*
Florence, Marion country.

FOURTH YEAR.

Name.	*Post-office and county (or state).*
Bonnie Frances Adams,	Marvin, Phillips.
Morrison Carpenter Adams,	Marvin, Phillips.
Delmer Akin,	Manhattan, Riley.
Melvia Fairetta Avery,	Manhattan, Riley.
Minerva Blachly,	Manhattan, Riley.
Albert Edwin Blair,	Quenemo, Osage.
Fred Winchester Bobbitt,	Manhattan, Riley.
Lillie Grace Bolton,	Paxico, Wabaunsee.
James Courtney Bolton,	Paxico, Wabaunsee.
Joseph Abbott Butterfield,	Topeka, Shawnee.
Willit Ramson Correll,	Manhattan, Riley.
Ernest Lerned Cottrell,	Wabaunsee, Wabaunsee.
Alfred Burton Dille,	Edgerton, Johnson.
Josephine Finley,	Randolph, Riley.
Harry Verne Forest,	Thayer, Neosho.
Francis Joseph Habiger,	Bushton, Rice.
John George Haney,	Courtland, Republic.
John Andrew Harvey,	Junction City, (Riley.)
Grace Edna Hill,	Phillipsburg, Phillips.
Hiram Adsit Holzer,	Girard, Crawford.
Charles Clifford Jackson,	Doylestown, *Pennsylvania.*
Fred Emanuel Johnson,	Melvern, Osage.
Harry Wallace Johnston,	Caldwell, Sumner.
Lot Parker Keeler,	Ottawa, Franklin.
John Martin Kessler,	Topeka, Shawnee.
Albert Thomas Kinsley,	Oakley, Logan.
Frank Elmer LaShelle,	Chepstow, Washington.
Christian Dagobert Lechner,	Morganville, Clay.
Clara Long,*	Manhattan, Riley.
Ross Long,	Manhattan, Riley.
Louisa Mary Maelzer,	Neuchatel, Nemaha.
Kate Anna Manley,	Council Grove, Morris.
Claud Masters,	Hillsdale, Miami.
Robert Burtice Mitchell,	Florence, Marion.
Jennie June Needham,	Lane, Franklin.
Roscoe Townley Nichols,	Liberal, Seward.
Fanny Gertrude Noyes,	Wabaunsee, Wabaunsee.
Harry Delphos Orr,	Riley, Riley.
George Washington Owens,	Alma, Wabaunsee.
Kate Paddock,	Manhattan, Riley.
Carrie Vashti Painter,	Meade, Meade.
Ella Emerson Peck,	Big Valley, *Texas.*
Anna C. Pfuetze,	Manhattan, Riley.
Andrew Pottorf,	Riley, Riley.
Mary Bly Pritner,	Keats, Riley.
Otto Independence Purdy,	Fairview, Brown.
Delmer William Randall,	Manhattan, Riley.
William Harry Roberts,	Walsburg, Riley.

---

* Deceased.

Name.	*Post-office and county* (*or state*).
Frank Sessions Shelton,	Brisbane, *Queensland.*
Harley Lee Snodgrass,	Manhattan, Riley.
Louise Mary Spohr,	Manhattan, Riley.
Stella Stewart,	Manhattan, Riley,
Annie Louisa Streeter,	Milford, Geary.
Fayette Charles Sweet,	Burlington, Coffey.
Leon Henry Thomas,	Oakley, Logan.
Nellie Towers,	Manhattan, Riley.
Otho Sprague True,	Vera, Wabaunsee.
James Otis Tulloss,	Rantoul, Franklin.
William Guy Tulloss,	Rantoul, Franklin.
George Franklin Wagner;	Enterprise, Dickinson.
Mary Lana Waugh,	Manhattan, Riley.
Charles Bernard White,	Waverly, Coffey.
Nannie Elizabeth Williams,	Edgerton, Johnson.
Alexander George Wilson,	Mapleton, Bourbon.
Frederick Otto Woestemeyer,	Bethel, Wyandotte.

THIRD YEAR.

Lizzie Jane Agnew,	Yates Center, Woodson.
Grace Allingham,	Manhattan, Riley.
Edgar McCall Amos,	Manhattan, Riley.
Elizabeth Edna Asbury,	Topeka, Shawnee.
Minnie Atwell,	Manhattan, Riley.
Effie Elizabeth Bailey,	Manhattan, Riley.
Alvah I. Bain,	Marysville, Marshall.
Harry M. Bainer,	Ottawa, Franklin.
Charlotte Almira Berkey,	Cleveland, *Missouri.*
John Harold Blachly,	Manhattan, Riley.
William Keller Blachly,	Leonardville, Riley.
Zina Leigh Bliss,	McPherson, McPherson.
Bettie Briggs,	Briggs, Geary.
Louie Brigham,	Randall, Jewell.
Beulah J. Brown,	Leavenworth, Leavenworth.
Nellie Burtner,	Manhattan, Riley.
Tom Melancthon Cannon,	White Eagle, *Oklahoma.*
Clarence Asa Chandler,	Argentine, Wyandotte.
Frederick Waldemar Christensen,	Mariadahl, (Riley.)
Ernest Mansel Cook,	Oakley, Logan.
Joseph Bryson Corbett,	Manhattan, Riley.
Charles McClain Correll,	Manhattan, Riley.
John Francis Crowl,	Chino, *California.*
Mary Elizabeth Crum,	Stockdale, Riley.
Amanda Culp,	Leavenworth, Leavenworth.
Jennie Maude Currie,	Manhattan, Riley.
Sarah Emily Davies,	Bala, Riley.
Laura Orminta DeArmond,	Manhattan, Riley.
Harry Leroy Dern,	Kingman, Kingman.
Homer Derr,	Baldwin, Douglas.
Mary Alberta Dille,	Edgerton, Johnson.
Charles Madison Drown,	Manhattan, Riley.

Name.	*Post-office and county (or state).*
Charles Eastman	Ogden, Riley.
Robert Edward Eastman	Bloomington, Osborne.
Jennie Edelblute	Keats, Riley.
Ernest Christian Gasser	Neosho, *Missouri.*
George Ogden Greene	Lincoln, Lincoln.
Hermann Haffner	Junction City, Geary.
Gustaf William Hanson	Marquette, McPherson.
James William Harner	Manhattan, Riley.
Lillian Estelle Hathaway	Grant, Riley.
Daisy Gladys Hoffman	Enterprise, Dickinson.
Edward Wilfred House	Manhattan, Riley.
Floyd James Howard	Manhattan, Riley.
Minnie Howell	Manhattan, Riley.
Edith Huntress	Manhattan, Riley.
Merton Raymond Johnson	Olsburg, Pottawatomie.
Louis Berton Jolley	Onaga, Pottawatomie.
Melville Eugene Joslin	Randall, Jewell.
Harold Bigelow Kempton	Wolfville, *Nova Scotia.*
Ina Bertha Kneeland	Milford, Geary.
Raymond George Lawry	Hollis, Cloud.
Walter Fisk Lawry	Hollis, Cloud.
Erma Elizabeth Lock	Riley, Riley.
Harvey McCaslin	Barnes, Washington.
N. Ollie McCurry	Milo, Lincoln.
Roland McKee	Marysville, Marshall.
Madge Ruth McKeen	Manhattan, Riley.
Nettie McLaren	Altoona, Wilson.
Mary Eleanor Mathewson	Topeka, Shawnee.
William Elmer Miller	Potter, *Oklahoma.*
Margaret Jane Minis	Manhattan, Riley.
Clarence William Morgan	Hillside, Phillips.
Eugene Lawrence Morgan	Hillside, Phillips.
Fred Byers Morlan	White Rock, Republic.
Andrew Edward Oman	Walsburg, Riley.
Joseph Lloyd Pancake	Scott City, Scott.
Albert William Parrack	Riley, Riley.
Ruthford Brockway Peck	Oakland, Shawnee.
Paul du Chaillu Piersol	Manhattan, Riley.
Leonard Poston	Netawaka, Jackson.
Lutheran Eugene Potter	Rose, Woodson.
Mary Sandell	Manhattan, Riley.
William Stephen Sargent	Riley, Riley.
Adelaide Short	Fruita, *Colorado.*
Anna Augusta Siegrist	Manhattan, Riley.
Milton David Snodgrass	Manhattan, Riley.
Charles Chester Sowell	Vassar, Osage.
Clara Spilman	Manhattan, Riley.
Mabel Stewart	Manhattan, Riley.
Cora Edith Swingle	Manhattan, Riley.
Dean Brett Swingle	Manhattan, Riley.
Perrin K. Symns	Brenner, Doniphan.

Name.	*Post-office and county (or state).*
Barton Thompson,	Garrison, Pottawatomie,
Laura Helen Trumbull,	Manhattan, Riley.
Joseph Culver Van Orsdel,	Waterville, Marshall.
Jessie May Wagner,	Enterprise, Dickinson.
Luther Watts Waldraven,	Winkler, Riley.
Fred Walters,	Manhattan, Riley.
Nellie M. Winter,	Manhattan, Riley.

SECOND YEAR.

Rosa May Agnew,	Yates Center, Woodson.
Marian Allen,	Manhattan, Riley.
Cyrus Norton Allison,	Florence, Marion.
Cecil Girard Anderson,	Manhattan, Riley.
Robert George Andrews,	Marysville, Marshall.
Henry Albert Avery,	Manhattan, Riley.
Wallace W. Baird,	Milford, (Riley.)
Edna DeHaven Barnes,	Manhattan, Riley.
Hattie Beachum,	Manhattan, Riley.
George Ford Bean,	Alma, Wabaunsee.
Edwin Gaines Beckes,	Grand Haven, (Osage.)
Roy Robert Berkley,	Manhattan, Riley.
Charles Dallas Blachly,	Leonardville, Riley.
Elizabeth Blachly,	Manhattan, Riley.
Loua Adelle Blachly,	Manhattan, Riley.
Georgia Evaline Blaney,	Manhattan, Riley.
Bessie Sarah Bourne,	Delphos, Ottawa.
Harry S. Bourne,	Delphos, Ottawa.
Roy Allison Bower,	Eureka, Greenwood.
Warren Luther Bowlby,	Fairport, Russell.
Martha Amelia Briggs,	Briggs, Geary.
Prudence Dell Broquet,	Manhattan, Riley.
Alexander Dashway Brown,	Manhattan, Riley.
Ben Remenyi Brown,	Manhattan, Riley.
Elizabeth Barrett Browning,	Manhattan, Riley.
Charles Jay Burson,	Niotaze, Chautauqua.
Howard Frank Butterfield,	Hull, Marshall.
Emma M. Cain,	Clay Center, Clay.
Louis Marion Chase,	Hoyt, Jackson.
Elmer E. Chronister,	Abilene, Dickinson.
Charles Howard Clark,	Kinsley, Edwards.
Robert Curtis Cole,	Dennison, Jackson.
Murray Stanley Cole,	Dennison, Jackson.
Edwin Charles Cook,	Oakley, Logan.
Farley D. Copping,	Delphos, Ottawa.
Mabel Aletta Corbett,	Manhattan, Riley,
Ina Foote Cowles,	Sibley, Douglass.
Lotta Irene Crawford,	Manhattan, Riley.
Fannie Rachel Ellen Dale,	Manhattan, Riley.
Joe Robert Davidson,	Agricola, Coffey.
Laura Davidson,	Agricola, Coffey.
Mary Ann Davies,	Bala, Riley.

Name.	*Post-office and county* (*or state*).
Herman August Dieball,	Alma, Wabaunsee.
Edgar Willis Doane,	Louisville, Pottowatomie.
Cora Alice Doverspike,	Welcome, Geary.
Noble Dunn,	Oxford, (Cowley.)
Vollie M. Emmert,	Blue Rapids, Marshall.
Frederick William Epps,	Topeka, Shawnee.
Robert Alexander Esdon,	Olsburg, Pottawatomie.
Rainey Faris,	Dennison, Jackson.
Harry Haines Fay,	Wilsey, Morris.
Fred Fockele,	Le Roy, Coffey.
Ray L. Gamble,	Homewood, Franklin.
Louisa Gerteis,	Derby, Sedgwick.
Clark A. Gingery,	Summerfield, Marshall.
Myron Gould,	Fairmount, Leavenworth.
Alanson L. Hallsted,	Havana, Montgomery.
Hakon Hansen,	Guy, Sheridan.
Gertrude Hanson,	Manhattan, Riley.
Maude Hart,	Manhattan, Riley,
William Lee Harvey,	Arkalon, Seward.
Fred Willis Haselwood,	Clifton, (Clay.)
Orr Henderson,	Eureka, Greenwood.
Eugene Cleon Higgins,	Grand Haven, (Osage.)
Christine Delphine Hofer,	Manhattan, Riley.
Henrietta Mattie Hofer,	Manhattan, Riley.
Karl William Hofer,	Manhattan, Riley.
Thaddeus L. Hoffman,	Enterprise, Dickinson.
William Hofman,	Manhattan, (Pottawatomie.)
Hartley Bowen Holroyd,	Manhattan, Riley.
Ada Beatrice Hooker,	Manhattan, Riley.
Nellie Malitta Hubble,	Manhattan, Riley.
Fred M. Johnson,	Marysville, Marshall.
Georgeanna Jolly,	Manhattan, Riley.
Jesse W. Joss,	Fairview, Brown.
Edgar Willes Kimball,	Manhattan, Riley.
Samuel Robert Kimble,	Manhattan, Riley.
Helen Knostman,	Manhattan, Riley.
George Otto Kramer,	Wabaunsee, Wabaunsee.
Daniel Ladd,	Manhattan, Riley.
Jessie Mabel Lantz,	Waldo, Russell.
Arthur Moore Lee,	Manhattan, Riley.
Harry Vincent Lowry,	Harris, Anderson.
Otto Meade McAninch,	Manhattan, Riley.
Carrie Melissa McCord,	Manhattan, Riley.
Eva Lenora McCoy,	Caney, Montgomery.
Bertha McCreary,	Manhattan, Riley.
Edward James McKee,	Marysville, Marshall.
John A. McKenzie,	Solomon, Saline.
Amelia Augusta Maelzer,	Neuchatel, Nemaha.
Walter Eldridge Mathewson,	Topeka, Shawnee.
Emma Maude Miller,	Milford, Geary.
John Rutherford Minis,	Manhattan, Riley.

Name.	*Post-office and county* (*or state*).
Miriam Delia Monroe,	Whiting, Jackson.
Kate Bell Morgan,	Manhattan, Riley.
Benjamin Franklin Mudge,	Manhattan, Riley.
Ruth A. Mudge,	Manhattan, Riley.
Charles Elmer Munkres,	Kelso, Morris.
Jessie May Mustard,	Manchester, Dickinson.
Dorothy Myers,	Manhattan, Riley.
Fred Myers,	Marquette, McPherson.
James Lawrence Nelson,	St. Louis, *Missouri*.
Fred Cranston Nicholson,	Manhattan, Riley.
Clara Nitcher,	Ottawa, Franklin.
Martha Nitcher,	Ottawa, Franklin.
Ida Lewis Norton,	Manhattan, Riley.
Margaret Alice Norton,	Manhattan, Riley.
John H. Oesterhaus,	Junction City, Geary.
Carrie Bell Oneel,	Manhattan, Riley,
Lela Elizabeth Parks,	Manhattan, Riley.
Pearl Mabel Phillips,	Manhattan, Riley.
Helena Maude Pincomb,	Hector, Johnson.
Bryant Poole,	Briggs, Geary.
Abbie Putnam,	Manhattan, Riley.
William Stephen Read,	Sutphen, Dickinson.
Harry Paul Richards,	Manhattan, Riley.
Leroy Rigg,	Marvin, Phillips.
Herman Hale Riley,	Waverly, Coffey.
Florence Rebecca Ritchie,	Manhattan, Riley.
Kate L. Robertson,	Manhattan, Riley.
Elsie May Robinson,	Manhattan, Riley.
Alice May Ross,	Manhattan, Riley.
Maude Ross,	Manhattan, Riley.
Alvira Salkeld,	Manhattan, Riley.
Maude Sauble,	Florence, Marion.
Charles A. Scott,	Westmoreland, Pottawatomie.
Edward Alfred Shirtcliff,	Otego, Jewell.
Ethel Lillian Shofe,	Manhattan, Riley.
Florence Shuyler,	Nickerson, Reno.
William Henry Soupene,	Manhattan, (Pottawatomie.)
Charles Orval Sparks,	Ludell, Rawlins.
Walter Hayward Spencer,	Yates Center, Woodson.
Amelia Spohr,	Manhattan, Riley.
John Leonard Stein,	Gypsum, Saline.
Adelaide Strite,	Garrison, Pottawatomie.
Blanche Elsie Stump,	Manhattan, Riley.
Anna Odette Summers,	Waterville, Marshall.
Lucy A. Sweet,	Stockdale, Riley.
Millie Minerva Tague,	Manhattan, Riley.
Stella Mae Tharp,	Winfield, Cowley.
Myrtie Lucy Toothaker,	Wheaton, Pottawatomie.
Charles Daniel Townley,	Milan, *Missouri*.
Ralph F. Triplett,	Clay Center, Clay.
Helen Castle True,	Vera, Wabaunsee.

Name.	*Post-office and county (or state).*
Clayborne C. Turner,	Oakley, Logan.
Pearl Julia Turner,	Rock Creek, Jefferson.
Florence Helen Vail,	Manhattan, Riley.
Raymond S. Vail,	Manhattan, Riley.
Harriet Emily Van Everen,	Manhattan, Riley.
Phillip Farrand Van Everen,	Manhattan, Riley.
Victor Emanuel Vilander,	Cleburne, Riley.
Blaine Vosburg,	Thayer, Neosho.
Mary Caroline Wagner,	Enterprise, Dickinson.
Orin Russell Wakefield,	Wilsey, Morris.
Bolivar Kernest Walters,	Manhattan, Riley.
Carrie Emma Walters,	Milford, Geary.
Emma Ward,	Quenemo, Franklin.
Harvey Augustus Washburn,	Riley, Riley.
Barbara Welter,	Myers Valley, Pottawatomie.
Herman Henry Wetzig,	Winkler, Riley.
David Dwight White,	Newton, Harvey.
Eleanor Mary White,	Newton, Harvey.
Paul Anthony Wiedeman,	Alma, Wabaunsee.
Cyrus Edward Wilkins,	Vilas, Wilson.
George Edward Williams,	Hoganville, Graham.
Kathrina Winter,	Manhattan, Riley.
Aix Lacy Worswick,	Oskaloosa, Jefferson.
Lucy Joan Wyatt,	Westmoreland, Pottawatomie.
Mary Estelle Yenawine,	Manhattan, Riley.
Henry Theodore York,	Rossville, Shawnee.
James Lucien Young,	Stanley, Johnson.

FIRST YEAR.

Harvey Adams,	Osawkie, Jefferson.
Charlie Henry Aiman,	Newton, Harvey.
Abbie Lorena Akin,	Zeandale, Riley.
Pearl Akin,	Manhattan, Riley.
Mamie Alexander,	Welda, Anderson.
Orlo Wilder Ames,	Riley, Riley.
Carl Anderson,	Manhattan, Riley.
Maude Idella Archer,	Glenloch, Anderson.
Amy Viola Atwell,	Utica, Ness.
Charles M. Baird,	Arkansas City, Cowley.
Charles Olin Baird,	Marquette, McPherson.
William Baird,	Arkansas City, Cowley.
Mary Olive Barr,	Myers Valley, Pottawatomie.
Daniel E. Baumbaugh,	Moonlight, Dickinson.
Earl Maynard Baxter,	Manhattan, Riley.
Samuel Keith Beach,	Keene, Wabaunsee.
John J. Beck,	Nickerson, Reno.
Adelaide Pearl Bell,	Manhattan, Riley.
Lawrence C. Bell,	Arkansas City, Cowley.
Lydia Margaret Bell,	Manhattan, Riley.
Fred Edward Bender,	Manhattan, Riley.
Maud Inez Benson,	Hull, Marshall.

Name.	*Post-office and county (or state).*
Evelyne Myrtle Berkley,	Manhattan, Riley.
Abram E. Bert,	Moonlight, Dickinson.
Wallace Newton Birch,	Manhattan, Riley.
John W. Blachly,	Leonardville, Riley.
Mary Bolton,	Paxico, Wabaunsee.
Richard Franklin Bourne,	Delphos, Ottawa.
Edwin T. Bower,	Manhattan, Riley.
Darius N. Bowers,	Crescent, Kiowa.
Frank William Boyd,	Kensington, Smith.
Leon Broquet,	Manhattan, Riley.
Thaddie C. Brown,	Guilford, Wilson.
William C. Brown,	Waterville, Marshall.
Paul Bert Bryson,	Abilene, Dickinson.
Eva Lucinda Buffum,	Manhattan, Riley.
Jennie Grace Buffum,	Manhattan, Riley.
Faith Burroughs,	Austin, *Illinois*.
Ezra Garfield Burt,	Eureka, Greenwood.
Bertha Floy Caldwell,	Garnett, Anderson.
Fred Wallace Caldwell,	Garnett, Anderson.
August W. Carlson,	Cleburne, Riley.
August Belmont Carnahan,	Douglass, Butler.
Allie E. Carnahan,	Berryton, Shawnee.
William Elery Catherman,	Tescott, Ottawa.
Floyd Adelbert Champlin,	Phillipsburg, Phillips.
Elijah Ellis Chase,	Merriam, Johnson.
Ezra James Clark,	Manhattan, Riley.
Roy Justus Clark,	Fredonia, Wilson.
George M. Click,	Havana, Montgomery.
Hayes Marion Coe,	Yates Center, Woodson.
Maude Mildred Coe,	Yates Center, Woodson,
Linna Coffman,	Overbrook, Osage.
S. H. Conley,	Rossville, Shawnee.
Vera Ann Copping,	Delphos, Ottawa.
Daisy Edith Crans,	Leonardville, Riley.
Winifred Mae Crawford,	Wetmore, Nemaha.
Frank A. Criss,	Grigsby, Scott.
Albert Russell Crozier,	Burdett, Pawnee.
Claude Carrol Cunningham,	Manhattan, Riley.
Bertha May Dana,	Manhattan, Riley.
Anna Elizabeth Daniel,	Overbrook, Osage.
Frank Daniel,	Overbrook, Osage.
Elliott Perrie Daniels,	Birmingham, Jackson.
William Doz. Davis,	Sharp's Creek, McPherson.
Violet Day,	Manhattan, Riley.
Tobe Delahunt,	Olathe, Johnson.
Daniel Curtis Deming,	Larkin, Jackson.
Earl Scott Dewey,	Manhattan, Riley.
Roy Nathan Dorman,	Wabaunsee, Wabaunsee.
Myrtle Dougherty,	Manhattan, Riley.
Isaac Newton Downs,	Eureka, Greenwood.
Orrin Pomeroy Drake,	Beattie, Marshall.

Name.	*Post-office and county* (*or state*).
Oliver J. Drown,	Manhattan, Riley.
Walter Dimmick Duffy,	Manhattan, Riley.
Anna Dunlap,	Walsburg, Riley.
Edwin Irvin Durant,	Riley, Riley.
Charles Ross Edwards,	Phillipsburg, Phillips.
Guy Henry Edwards,	Phillipsburg, Phillips.
Leonora Darlin Eggen,	Lawrence, Marion.
Rush Elmore,	Tecumseh, Shawnee.
Laura Engel,	Manhattan, Riley.
Lizzie Engel,	Manhattan, Riley.
Albert R. Engle,	Minneapolis, Ottawa.
Joseph Conroe Engle,	Minneapolis, Ottawa.
William Leslie English,	Renfrow, Grant.
Emma Louise Ericson,	Manhattan, Riley.
Bertha Evans,	Manhattan, Riley.
Walter Wendall Evans,	Wilsey, Morris.
William Oscar Ewing,	Parsons, Neosho.
William Thomas Fay,	Jewell City, Jewell.
James William Fields,	McPherson, McPherson.
LeRoy Firebaugh,	Osawatomie, Miami.
Vlasta Maude Fisher,	Manhattan, Riley.
Mabel Rebecca Fix,	Volland, Wabaunsee.
Fred M. Fleming,	Summerfield, Marshall.
Annie E. Foshay,	Overbrook, Osage.
Una Maude Fowler,	Manhattan, Riley.
Andrew Jewell Francis,	Lucas, Russell.
Eugene Dillon Frank,	Bowling, Leavenworth.
R. C. Frederick,	Culver, Ottawa.
David Emerson Gall,	Reserve, Brown.
Eunice May Gates,	Manhattan, Riley.
Mary Mabel Gibbons,	Capioma, Nemaha.
Marie Gibbs,	Industry, Clay.
Frances Gibson,	Geneseo, Rice.
Robert James Gibson,	Raymond, Rice.
Fred Norton Gillis,	Keene, Wabaunsee.
M. H. Ginter,	Winchester, Jefferson.
Courtney P. Grover,	Osawkie, Jefferson.
George Grubb,	Netawaka, Jackson.
Edward August Haffner,	Junction City, Geary.
Lydia F. Haffner,	Junction City, Geary.
Edna Haines,	Manhatten, Riley,
Thomas L. Hall,	Kansas City, *Missouri.*
John D. Hansen,	Willis, Brown.
Esther V. Hanson,	Marquette, McPherson.
Arthur Harper,	Melvern, Osage.
Lola May Harris,	Harveyville, Wabaunsee.
Cora Belle Hart,	Partridge, Reno.
R. Charles Hart,	Randall, Jewell.
Leslie Arthur Hartford,	Buhler, Reno.
John Haulenbeck,	Manhattan, Riley.
Jessie O. Hawkins,	Fort Scott, Bourbon.

Name.	*Post-office and county (or state).*
Elvira Hawkinson,	Marquette, McPherson.
Benjamin F. Haynes,	Marvin, Phillips.
John James Healey,	Wallace, Wallace.
William B. Heckman,	Pfafftown, *North Carolina.*
Marion Martha Hepworth,	Burlingame, Osage.
Joseph Wiley Higginbotham,	Erwin, *Oklahoma.*
Philip Kearney Hight,	Arkansas City, Cowley.
Frank Ferris Hillyer,	Wilsey, Morris.
Allen L. Holcombe,	Cheyenne, *Wyoming.*
Albert Houck,	Admire, Lyon.
John Knowlton Hougham,	Manhattan, Riley.
Sarah C. Hougham,	Manhattan, Riley.
Ernest Alfred Houghton,	Junction City, Geary.
Newell Howard,	Belvidere, Kiowa.
Minerva Ann Howell,	Manhattan, Riley.
John Sherman Howey,	Topeka, Shawnee.
Charles Hubble,	Manhattan, Riley.
Flora Alice Hudspeth,	Manhattan, Riley.
Fred Ed Jacobson,	Norway, Republic.
Anna Johnson,	Solomon Rapids, Mitchell.
Ida Matilda Johnson,	Melvern, Osage.
Roscoe Ray Keeler,	Centropolis, Franklin.
Leeta Birdilla Keene,	Clay Center, Clay.
De Kennard,	Smith Center, Smith.
Daniel Lyon Kent,	Florence, Marion.
Agnes Alvina Knapp,	Vernon, Woodson.
Abraham Lincoln Leonard,	Ellis, Ellis.
John Wesley Lewis,	Manhattan, Riley.
Ralph Joseph Linscott,	Holton, Jackson.
Mabel E. Lock,	Riley, Riley.
George Logan,	Manhattan, Riley.
William L. Lyman,	Manhattan, Riley.
Mary McBoyle,	Bonaccord, Dickinson.
Rachel N. McCoy,	Manhattan, (Pottawatomie.)
Rosa Margaret McCoy,	Manhattan, (Pottawatomie.)
Edwin William McCrone,	Haddam, Washington.
Sara Grace McCrone,	Haddam, Washington.
Thomas E. McCurry,	Milo, Lincoln.
Carl W. McKeen,	Russell, Russell.
Ralph McNicol,	Lost Springs, Marion.
Edward Marksheffel,	Manhattan, Riley.
Marshall M. Matts,	Homewood, Franklin.
Alvin Otto Myer,	Menager, Wyandotte.
Clara Lillian Mills,	Riley, Riley.
Roland Calvin Mitchell,	Florence, Marion.
William Sylvester Mize,	Olathe, Johnson.
Oliver Bert Moore,	Eureka, Greenwood.
Marshall E. Morlan,	Welcome, Geary.
Lewis Claude Morton,	Osage City, Osage.
Roger Bonner Mullen,	St. Joseph, *Missouri.*
Belle Torrance Munger,	Eureka, Greenwood.

Name.	*Post-office and county (or state).*
Mabel Regina Nelson,	Wilber, *Oklahoma.*
Nellie Therese Nilson,	Manhattan, Riley.
Fred Oberhelman,	Bodaville, Riley.
Anna Luella O'Daniel,	Manhattan, Riley.
Mary Lorena O'Daniel,	Westmoreland, Pottawatomie.
Claude Eugene Orendorf,	Ringwood, *Oklahoma.*
Walter E. Pangburn,	Waldo, Russell.
Arda Parker,	Wardin, *Oklahoma.*
August Peak,	Manhattan, Riley.
Herbert H. Perry,	Girard, Crawford.
Ira Lovell Perry,	Wabaunsee, Wabaunsee.
Jennie Grace Phillips,	Kackley, Republic.
Myrtle Phillips,	Kackley, Republic.
Grover Poole,	Briggs, Geary.
Burr Newton Porter,	Phillipsburg, Phillips.
John R. Powers,	Los Angeles, *California.*
Murray Edward Price,	Holling, Douglas.
George Henry Pulk,	Lucas, Russell.
George Fred Punteney,	Frankfort, Marshall.
Nellie Punteney,	Frankfort, Marshall.
Willis Howard Purdy,	Fairview, Brown.
Frank White Purcell,	Manhattan, Riley.
William Arthur Randle,	Bala, Riley.
Arthur James Rathbone,	Manhattan, Riley.
John A Reh,	Homewood, Franklin.
Arthur J. Rhodes,	Manhattan, Riley.
Jesse Clyde Rickman,	Manhattan, Riley.
Ernest Chester Ricord,	Esdon, Jewell.
Frankie Alice Riddell,	Conway, McPherson.
Wayne Riddle,	Marion, Marion.
Owen Haworth Roberts,	Maryville, *Missouri.*
Earl Nathaniel Rodell,	Marquette, McPherson.
Eugene V. Roe,	Silver Lake, Shawnee.
John Francis Ross,	Webber, Jewell.
Ollie Ingeborg Ross,	Webber, Jewell.
Pontus Henry Ross,	Webber, Jewell.
Alvirtis Cantford Salkeld,	Manhattan, Riley.
Zeta Salkeld,	Manhattan, Riley.
Charles Franklin Schafer,	Jewell City, Jewell.
Fred Lewis Schneider,	Purcell, Doniphan.
John Marcus Scott,	Westmoreland, Pottawatomie.
Edmond Raymond Secrest,	Randolph, Riley.
Frank J. Sexton,	Longton, Elk.
Arthur C. Shannon,	Vernon, Woodson.
Thomas Wilson Shannon,	Vernon, Woodson.
Orville Nelson Shaw,	Harveyville, Wabaunsee.
Alfred J. Shearer,	Frankfort, Marshall.
Glen Reid Shepherd,	Manhattan, Riley.
Letta Celestia Sherwood,	Manhattan, Riley.
Lucia Sherwood,	Manhattan, Riley.
Robert Benjamin Sherwood,	Manhattan, Riley.

Name.	*Post-office and county (or state).*
Harry Allen Shuyler,	Nickerson, Reno.
Garfield William Skow,	Leonardville, Riley.
Bruce Sledd,	Raymond, Rice.
Charles Franklin Smith,	Keighley, Butler.
Frank H. P. Smith,	Manhattan, Riley.
Fred G. Smith,	Manhattan, Riley.
Leroy Smith,	Delphos, Ottawa.
Mary Helen Smith,	Manhattan, Riley.
William H. Smith,	Soldier, Jackson.
Hollis Snow,	Council Grove, Morris.
Dean Snyder,	Oskaloosa, Jefferson.
John Edwin Snyder,	Newkirk, *Oklahoma.*
Harrold Addison Spilman,	Manhattan, Riley.
Francis Ulysses Stewart,	Leonardville, Riley.
Lena Ethlyn Stewart,	Leonardville, Riley.
Noah John Stewart,	Arkansas City, Cowley.
Scott Winfield Stine,	Waverly, Coffey.
Anna Virginia Stingley,	Manhattan, Riley.
Ora Day Strong,	McFarland, Wabaunsee.
William Henry Sullivan,	Frankfort, Marshall.
Charles Taber,	Burlingame, Osage.
Raymond Kelley Taber,	Burlingame, Osage.
Lena Tatman,	Holton, Jackson.
John O. Thomas,	Bala, Riley.
Jesse K. Tilford,	Waverly, Coffey.
Mary Etta Towers,	Manhattan, Riley.
Hezekiah Tracy,	New Lancaster, Miami.
Frieda Trunk,	Lyons, Rice.
Alonzo F. Turner,	Oakley, Logan.
Iden Gail Tulloss,	Rantoul, Franklin.
Charlie Van Dalsem,	Fairview, Brown.
Glen Van Dalsem,	Fairview, Brown.
Lester Henry Van Liew,	Manhattan, Riley.
Harry Nelson Vinall,	Oakley, Logan.
Alberta Lorena Voiles,	Manhattan, Riley.
Clytus Curtis Voiles,	Manhattan, Riley.
Roy Bingham Vrooman,	Parsons, Labette.
James Fredric Wadick,	Frankfort, Marshall.
Marcellus Idell Wagner,	Topeka, Shawnee.
Henry A. Walker,	Groveland, McPherson.
Homer Moss Walker,	Groveland, McPherson.
Karl O. Walters,	Manhattan, Riley.
Ina Dale Ware,	Manhattan, Riley.
Laura Bell Ware,	Manhattan, Riley.
Louella Washburn,	Riley, Riley.
Laura Mabel Waters,	Berryton, Shawnee.
Grace Victoria Watson,	Marysville, Marshall.
Frank Vance Weathers,	Howard, Elk.
Margaret Welter,	Myers Valley, Pottawatomie.
Albert A. Werner,	Alden, Rice.
Pauline Emily Wetzig,	Winkler, Riley.

Name.	*Post-office and county (or state).*
Carrie Jane White,	Newton, Harvey.
Leon Vincent White,	Manhattan, Riley.
Perley G. White,	Bennington, Ottawa.
William Walker White,	Newton, Harvey.
George Everett Whitney,	Manhattan, Riley.
Carl Herbert Theodore Widegren,	Morganville, Clay.
Gustav Wiebe,	Halstead, Harvey.
Camma Estelle Wilkins,	Vilas, Wilson.
Albert Royal Williams,	Hull, Marshall.
Charles Luvern Williams,	Ellis, Ellis.
Harry C. Williams,	Edgerton, Johnson.
Myron D. Williams,	Manhattan, Riley.
Thomas Williams,	Hull, Marshall.
Frank Clarence Wilson,	Galva, McPherson.
Homer Wilson,	Eudora, Johnson.
Henry Bernard Winter,	Manhattan, Riley.
Lloyd Elgin Wise,	Reserve, Brown.
Otto Witte,	Kansas City, *Missouri.*
John Dutton Wood,	Webber, Jewell.
Margaret Elizabeth Woodford,	Maple Hill, Wabaunsee.
N. S. Woolverton,	Acme, Dickinson.
Alice M. Worley,	Natoma, Osborne.
Alta L. Worley,	Natoma, Osborne.
Walter Scott Wright,	Marvin, Phillips.
Ellen Wyatt,	Westmoreland, Pottawatomie.
John Wyse,	Yates Center, Woodson.
George Lester Yeakley,	Great Bend, Barton.
Guy D. Yoakum,	Basehor, Leavenworth.
Joe Ell Young,	Stanley, Johnson.
Bert Zirkle,	Bushton, Rice.
Ed. H. Zirkle,	Richland, Shawnee.

PREPARATORY.

Anton Anderson,	Palmer, Washington.
Lillie Margrete Anderson,	Westmoreland, Pottawatomie.
Wallace Anderson,	Jamestown, Jewell.
Harmon S. Armstrong,	Birmingham, Jackson.
Richard Auer,	Goodland, Sherman.
Willie J. Baehl,	Hoge Station, Leavenworth.
Harvey Wiltson Baker,	Marvin, Phillips.
Charles Albert Barr,	Myers Valley, Pottawatomie.
Cora Mae Beachum.	Manhattan, Riley.
Gladys Birdsall,	Iola, Allen.
Smile Blackman,	McPherson, McPherson.
Dorcas Blanchard,	Garden City, Finney.
Henry Elden Boardman,	Centralia, Nemaha.
Frank Bertun Bobbitt,	Manhattan, Riley.
J. M. Brenizer,	Abilene, Dickinson.
August Leonard Carlson,	Morganville, Clay.
Ivy May Chandler,	Manhattan, Riley.
Clifford Alon Chapman,	Cawker City, Mitchell.

Name.	*Post-office and county (or state).*
Peter Christianson,	Everest, Brown.
Alta Beatrice Church,	Westmoreland, Pottawatomie.
Edwin Cook,	Effingham, Atchison.
Perry Alfred Cooley,	Dennison, Jackson.
Roy F. Cox,	Manhattan, Riley.
James I. Cunningham,	Beattie, Marshall.
William Dempsey,	Doniphan, Doniphan.
Rosella Xavier Dixon,	Junction City, Geary.
Joseph C. Doege,	Tonganoxie, Leavenworth.
Susie Ellen Doverspike,	Welcome, Geary.
John P. Fadely,	Hiawatha, Brown.
Patrick John Farrell,	Louisville, Pottawatomie.
Thomas Leo Farrell,	Louisville, Pottawatomie.
Bertram J. Finch,	Waverly, Coffey.
Arthur Thomas Finley,	Parallel, Riley.
Emma Fix,	Volland, Wabaunsee.
John W. Garten,	Bennington, Ottawa.
Emma Gates,	Manhattan, Riley.
Guy Clemance Geiger,	Everest, Brown.
Byron Ash Ginter,	Winchester, Jefferson.
Jessie Mae Gist,	Capioma, Nemaha.
Rainey R. Glenn,	Block, Miami.
Cora Goodwin,	Manhattan, Riley.
Nathaniel L. Graves,	LaBelle, *Missouri.*
Emma Victoria Grecian,	Blosser, *Missouri.*
Martha Ann Jane Haden,	Wakefield, Clay.
May E. Hall,	Manhattan, Riley.
William H. Hall,	Hoyt, Jackson.
Mary Haluba,	———
Watson Handley,	Monument, Logan.
Thomas Christian Hansen,	Burns, Marion.
John Elga Harding,	Manhattan, Riley.
Robert Elmer Hardy,	Manhattan, Riley.
George Haulenbeck,	Manhattan, Riley.
Mary Florence Hawkins,	Fort Scott, Bourbon.
E. C. Healey,	Wyoming, Marshall.
Daniel Holke,	Napoleon, *Missouri.*
Ralph K. Holman,	Leavenworth, Leavenworth.
William Hart Hower,	Silver Grove, Lincoln.
Arthur Johnson,	Leavenworth, Leavenworth.
Axel Ferdinand Johnson,	Morganville, Clay.
William Johnson,	Columbus, Cherokee.
James A. Kaff,	Overbrook, Osage.
Ithamar Knapp,	Vernon, Woodson.
Ed. Logan,	Manhattan, Riley.
Joseph Loveland,	Cleveland, *Missouri.*
M. F. Lowry,	Abilene, Dickinson.
Dennis McBride,	Bennington, Marshall.
George D. McClintock,	Topeka, Shawnee.
George L. McCord,	Manhattan, Riley.
Ira John McCoy,	Sabetha, Brown.

Name.	*Post-office and county (or state).*
Everett N. McLeod,	Marysville, Marshall.
Edwin B. McProud,	Louisville, Pottawatomie.
Robert McQuiddy,	Newton, Harvey.
Ben W. McVay,	Wreford, Geary.
Edwin B. Maelzer,	Neuchatel, Nemaha.
Mikel Magnet,	Blaine, Pottawatomie.
Jakie Margreiter,	Glen Elder, Jewell.
Mary Josephine Monahan,	Manhattan, Riley.
George William Nason,	Rossville, Shawnee.
Martin A. Nelson,	Lovell, Jewell.
George William Nichols,	McPherson, McPherson.
Jesse David Nitcher,	Ottawa, Franklin.
Fred O'Daniel,	Westmoreland, Pottawatomie.
Leonard Garfield Page,	Mayetta, Jackson.
Jesse L. Peters,	Alva, *Oklahoma.*
Emma Portenier,	Phillipsburg, Phillips.
May Porter,	Alma, *Nebraska.*
Milton Pritner,	Keats, Riley.
William Putnam,	Manhattan, Riley.
John W. Reinecke,	Heizer, Barton.
Cecil Irving Richmond,	Wichita, Sedgwick.
Benjamin Fred Richter,	Oskaloosa, Jefferson.
Adelbert Roberts,	Fostoria, Pottawatomie.
Ranier Henry Sanneman,	Clay Center, Clay.
Joseph Jerred Sexton,	Longton, Elk.
Enos N. Sheets,	Moonlight, Dickinson.
Byron Slade,	Stafford, Stafford.
Clyde Smith,	New Lancaster, Miami.
Thomas Ruthiford Talbot,	Marysville, Marshall.
Oscar Nelse Thorson,	Willis, Brown.
Carl Sanford Towner,	Enid, *Oklahoma.*
George I. Tucker,	Minneapolis, Ottawa.
Anthony George Vaught,	Manhattan, Riley.
Ralph Kirkland Ware,	Manhattan, Riley.
Eugene Homer White,	Delphos, Ottawa.
James H. Wilder,	Randall, Jewell.
Jenevi M. Wilkinson,	Topeka, Shawnee.
Andy Jackson Williams,	Corning, Nemaha.
Louis J. Williams,	Sharon Springs, Wallace.
William Totchie Wright,	McPherson, McPherson.
Barnhard Youngkamp,	Manhattan, (Pottawatomie.)

SPECIAL STUDENTS.

Minnie Anderson,	Junction City, Geary.
Daniel A. Beatty,	Talmo, Republic.
Marie Blachly,	Leonardville, Riley.
Bessie Burnham,	Manhattan, Riley.
Louise Burnham,	Manhattan, Riley.
Charles K. Corkill,	Manhattan, Riley.
Lois Marie Deming,	Larkin, Jackson.
Eugenia DePriest,	Manhattan, Riley.

Name.	*Post-office and county (or state).*
Orlando Ross Deputy,	Riley, Riley.
Matilda C. Doll,	Larned, Pawnee.
Orpha May Enochs,	Waterville, Marshall.
Hattie Esdon,	Olsburg, Pottawatomie.
Mrs. Edith B. Faville,	Manhattan, Riley.
B. W. Folsom,	McPherson, McPherson.
James Herman Fritts,	Manhattan, Riley.
K. K. Gregory,	Sia, *Asia Minor*, *Turkey*.
Anna Winter Hall,	Manhattan, Riley.
Mrs. Edna Harper,	Manhattan, Riley.
Enos Harrold,	Manhattan, Riley.
Elvira Hawkinson,	Marquette, McPherson.
Clarence R. Hepler,	Manhattan, Riley.
Marie Inga Hjort,	Council Grove, Morris.
Clara Kessler,	Topeka, Shawnee.
Katrine Krudop,	Manhattan, Riley.
Laura Elva Louber,	Junction City, Geary.
Mary A. Marlatt,	Manhattan, Riley.
Minnie May McCleary,	Beloit, Mitchell.
Bertha Miller,	Abilene, Dickinson.
Frank A. Nelson,	Windom, McPherson.
Emma Jean O'Daniel,	Westmoreland, Pottawatomie.
Mary Lorena O'Daniel,	Westmoreland, Pottawatomie.
Clara Pancake,	Scott City, Scott.
Edmond B. Purcell,	Manhattan, Riley.
Myron Edith Shannon,	Vernon, Woodson.
Olivia Marguerite Staatz,	Enterprise, Dickinson.
Edith Stafford,	Leonardville, Riley.
Henry Carl Sticher,	Yates Center, Woodson.
Mrs. Lizzie Chaney Ward,	Manhattan, Riley.
Carrilu Wilde,	St. Louis, *Missouri*.
Jenevi M. Wilkinson,	Topeka, Shawnee.

DAIRY STUDENTS.

Jacob S. Carl,	Cawker City, Mitchell.
Clifford Alon Chapman,	Cawker City, Mitchell.
J. A. Conover,	Sabetha, Nemaha.
E. Maltby Cooper,	Wabaunsee, Wabaunsee.
Abrem Bentzley Currier,	Garnett, Anderson.
Joe. Robert Davidson,	Agricola, Coffey.
Charles Alpha Gage,	Mont Ida, Anderson.
Harker Hersh,	Abilene, Dickinson.
Henry Alba Martin,	Junction City, (Riley.)
J. Walter Mills,	Ottawa, Franklin.
James Lyman Munger,	Eureka, Greenwood.
George Fred Punteney,	Frankfort, Marshall.
John A. Reh,	Homewood, Franklin.
Allen Rice,	McLouth, Jefferson.
Nelse Rimol,	Norway, Republic.
Alvin B. Sholten,	Beloit, Mitchell.
Alvin Lewis Smith,	Loveland, *Ohio*.

Name.	*Post-office and county (or state).*
G. G. Socolofsky,	Tampa, Marion.
John P. Thille,	Cawker City, Mitchell.
Jesse K. Tilford,	Waverly, Coffey.
Glen H. VanDalsem,	Fairview, Brown.
Ed. H. Webster,	Yates Center, Woodson.
George E. Williams,	Manhattan, Riley.
Oliver Wesley Wilcox,	Corning, Nemaha.
William J. Williams,	Osawkie, Jefferson.
William Zacharias,	Oak Mill, Atchison.

APPRENTICES IN SHOPS.

Harmon S. Armstrong,	Birmingham, Jackson.
Fred Edward Bender,	Manhattan, Riley.
John Harrold Blachly.	Manhattan, Riley.
A. F. Bushnell,	Iowaville, Sedgwick.
E. Maltby Cooper,	Wabaunsee, Wabaunsee.
G. W. Carlson,	———
James I. Cunningham,	Beattie, Marshall.
Tobe Delahunt,	Olathe, Johnson.
J. H. Fields,	McPherson, McPherson.
Lucian C. Freeland,	Almena, Norton.
C. A. Gasser,	Neosho, *Missouri.*
Jack William Gyles, *	Dodge City, Ford.
W. M. Haney,	Milford, Geary.
Samuel McCreedy Hanlon,	Orie, *Oklahoma.*
George R. Johnson,	Axtell, Marshall.
Roscoe Ray Keeler,	Centropolis, Franklin.
Albert W. Krotzer,	Manhattan, Riley.
Charles Curtis Livingston,	Abilene, Dickinson.
Robert McQuiddy,	Newton, Harvey.
Porter Haysc Rader,	Manhattan, Riley.
Claude Leroy Ream,	Wetmore, Nemaha.
George Boyd Rhodes,	Gardner, Johnson.
Theodore Sauble,	Florence, Marion.
H. E. Salvidge,	———
Howard Charles Shafer,	Goddard, Sedgwick.
Thomas W. Shearer,	———
S. O. Sheldon,	Topeka, Shawnee.
Clytus Curtis Voiles,	Manhattan, Riley.
Karl O. Walters,	Manhattan, Riley.
Daniel Webster,	———
Charles Luvern Williams,	Ellis, Ellis.
F. C. Wilson,	Galva, McPherson.

APPRENTICES IN PRINTING.

Arthur Thomas Finley,	Parallel, Riley.
Marie Gibbs,	Industry, Clay.
Hartley Bowen Holroyd,	Manhattan, Riley.

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* Deceased.

SUMMARY.

CLASSES.	*Gentlemen.*	*Ladies.*	*Total.*	*Average age.*
Postgraduate	24	16	40	26.15
Fourth year	43	22	65	21.9
Third year	55	37	92	20.98
Second year	95	82	177	20.33
First year	215	91	306	19.33
Preparatory	90	20	110	20.27
Special	11	29	40	....
Dairy	26	....	26	22.92
Apprentices	34	1	35	....
Counted twice	19	1	20	....
Totals	574	297	871	....

From 80 counties of Kansas, 823.
From 14 other states, 40.
From 3 foreign countries, 3.
Address not known, 5.

RECORD OF ATTENDANCE, 1879-1899.

COLLEGE YEAR.	*Dairy*	*Apprentice*	*Special*	*Preparatory**	*First year*	*Second year*	*Third year*	*Fourth year*	*Postgraduate*	*Counted twice*	*Total*	*Graduated*
1878–79	...	...	1	....	89	89	16	12	......	....	207	9
1879–80 †	...	...	1	....	166	61	35	11	2	....	276	7
1880–81 ‡	...	...	6	....	178	48	24	9	2	....	267	8
1881–82	...	...	5	....	227	50	19	11	......	....	312	9
1882–83	...	...	4	....	241	60	30	12	......	....	347	12
1883–84	...	...	2	....	255	92	26	18	2	....	395	17
1884–85	...	...	2	....	271	71	36	16	5	....	402	14
1885–86	...	...	1	....	273	91	35	24	4	....	428	21
1886–87	...	...	....	....	303	100	44	24	10	....	481	21
1887–88	...	...	....	....	305	92	46	27	2	....	472	22
1888–89 †	...	...	....	....	266	103	41	28	7	....	445	25
1889–90	...	...	1	....	307	105	63	28	10	....	514	27
1890–91 †	...	...	....	....	343	135	50	53	12	....	593	52
1891–92	...	...	....	....	336	139	62	37	10	....	584	35
1892–93	...	...	....	....	339	110	66	43	29	....	587	39
1893–94	...	...	....	....	275	141	72	42	25	....	555	40
1894–95	...	...	5	....	276	108	89	64	30	....	572	57
1895–96	...	...	3	....	353	121	67	71	32	....	647	66
1896–97 *	...	...	6	67	321	163	69	62	46	....	734	55
1897–98	6	9	15	77	316	174	77	82	57	10	803	69
1898–99	26	35	40	110	306	177	92	65	40	20	871	53

* Previous to 1896–'97 the preparatory students were not listed separately from the first years.

† Requirements for admittance raised.

‡ Course strengthened.

Graduates.

This list is made from the best data obtainable. A favor will be conferred by notifying the College Secretary of any errors or changes.

1867.

Henry L. Denison, A. M., 1257 Clarkson street, Denver, Colo. United States court reporter.
Belle M. (Haines) Pond, A. M., 1821 Clay street, Topeka, Kan. Housewife.
Emma L. (Haines) Bowen, A. M., Manhattan, Kan. Housewife.
John J. Points, A. M., Omaha, Neb. Lawyer.
Martha A. (White) Abbott, A. M., 283 South Oakley avenue, Chicago, Ill. Housewife.

1871.

Emily M. (Campbell) Robinson, A. B. Died in 1877.
Ella F. (Denison) Whedon, A. B., Lincoln, Neb. Housewife.
Luella M. Houston, A. B., Galveston, Tex. Milliner and dressmaker.
Charles O. Whedon, B. S., 1845 D street, Lincoln, Neb. Lawyer.
Kate E. (White) Turley, A. B., Chicago, Ill. Housewife.

1872.

Theophania M. (Haines) Huntington, A. B. Died in 1880.
Albert Todd, A. M., St. Augustine, Fla. Lieutenant First U. S. artillery.
S. Wendell Williston, A. M., M. D., Lawrence, Kan. Dean of medical school, State University.

1873.

Eliza Z. (Davis) Stringfield, A. B., 1111 Santee street, Los Angeles, Cal. Housewife.
Sam Kimble, A. B., Manhattan, Kan. Lawyer.

1874.

Harry A. Brous, A. M., M. D., southwest cor. Ninth and Pine streets, Philadelphia, Pa. Physician.
Edgar F. Clark, A. B., New Whatcom, Wash. Lawyer.
John E. Davis, B. S., D. D. S., 737 Oak street, Columbus, Ohio. Dentist.
William D. Gilbert, A. B., Atchison, Kan. Lawyer.
A. Judson White, A. B., Manhattan, Kan. Minister.

1875.

Reuben E. Lofinck, B. S., Manhattan, Kan. Merchant.
Alice E. (Stewart) Points, A. M., 128 Bright street, Jersey City, N. J. Teacher.

1876.

George A. Gale, A. B., Mangona, Fla. Merchant and postmaster.
Ella M. (Gale) Kedzie, A. B., Lansing, Mich. Teacher of art.
Nellie (Sawyer) Kedzie, M. S., Peoria, Ill. Professor of domestic economy, Bradley Polytechnic Institute.
Carrie M. Kimball, A. B., Garden Grove, Cal. Art instructor.
Minerva E. (Whitman) Heiser, A. B., Lyndon, Kan. Housewife.

1877.

Ella S. Child, B. S., Manhattan, Kan. Dressmaker.
George H. Failyer, M. S., Manhattan, Kan. Book dealer.
John S. Griffing, M. S., 401 Lake street, Topeka, Kan. Merchant.
Walter C. Howard, B. S., Penryn, Placer county, Cal. Minister.
Frederick O. Hoyt, B. S. Died in 1884.
Louis E. Humphrey, B. S., Chapman, Kan. Druggist.
James F. La Tourette, B. S., Idaho Springs, Colo. Miner.
Marion F. Leasure, B. S., LL. B, La Cygne, Kan. Lawyer.
William Ulrich, M. S., Manhattan, Kan. Contractor and builder.

1878.

Albert N. Godfrey, M. S., Port Townsend, Wash. Farmer and fruit-grower.
Charles S. McConnell, B. S.
Geo. S. Platt, B. S. Died in 1878.
Amos E. Wilson, B. S., Leavenworth, Kan. Banker.

1879.

Arthur T. Blain, B. S., Lacanada, Cal. Nurseryman.
Etta (Campbell) Blain, B. S., Lacanada, Cal. Housewife.
Wilmer K. Eckman, B. S., Longview, Tex. Bank cashier.
Corvin J. Reed, B. S., St. Clere, Kan. Farmer.
Harry C. Rushmore, B. S., 735 Lincoln street, Topeka, Kan. Merchant.
Wm. H. Sikes, B. S., Leonardville, Kan. Merchant and grain dealer.
Lewis A. Salter, B. S., Alva, Okla. Lawyer.
Ella (Vincent) McCormick, B. S., Clay Center, Kan. Bookkeeper.
Clarence E. Wood, B. S., A. B., Erwin, Okla. Farmer.

1880.

Augustine Beacham, B. S.
Lizzie R. (Cox) Kregar, B. S., Milford, Kan. Housewife.
Emma (Hoyt) Turner, B. S., Peru, Ill. Housewife.
Emma (Knostman) Huse, B. S., Arkansas City, Kan. Housewife.
Grace (Parker) Perry, B. S., Pocatello, Idaho. Housewife.
Noble A. Richardson, B. S., San Bernardino, Cal. Superintendent of city schools.
Maria E. (Sickels) Davis, B. S., Chicago, Ill. Housewife.

1881.

Flora (Donaldson) Reed, B. S., St. Clere, Kan. Housewife.
Ulysses G. Houston, B. S., Kingfisher, Okla. Lecturer.
Fletcher M. Jeffrey, B. S., Cripple Creek, Colo. Lawyer.
William J. Jeffrey, B. S., Boston, Mass. Law student, Boston University.
Darwin S. Leach, B. S., ——, Africa.
William J. Lightfoot, B. S., 307 May avenue, Cripple Creek, Colo. Deputy United States mineral surveyor.
Dalinda (Mason) Cotey, B. S., Logan, Utah. Professor of domestic arts, Utah Agricultural College.
Wirt S. Myers, B. S., Tampa, Fla. Furniture manufacturer.

1882.

J. Chester Allen, B. S. Died in 1885.
Ida (Cranford) Sloan, B. S., Stillwater, Cal. Housewife.
Edward V. Cripps, B. S., ——.
Warren Knaus, M. S., McPherson, Kan. Editor.
Mattie E. (Mails) Coons, B. S., Manhattan, Kan. Housewife.
Allie S. (Peckham) Cordry, B. S., Minneapolis, Kan. Housewife and art teacher.
Belle (Selby) Curtice, B. S., 604 American Bank building, Kansas City, Mo. Housewife.
Burton L. Short, B. S., Kansas City, Kan. Assistant postmaster.
John A. Sloan, B. S., Stillwater, Cal. Farmer and nurseryman.

1883.

James W. Berry, B. S., Jewell City, Kan. Lumberman.
Mary C. Bower, B. S., Manhattan, Kan. Clerk.
Lewis W. Call, B. S., LL. M., Washington, D. C. Chief clerk, judge-advocate general's office U. S. war department.
Emma E. Glossop, B. S., Lexington, Ill. Teacher city schools.
William J. Griffing, B. S., Manhattan, Kan. Farmer and fruit-grower.
Phœbe E. Haines. M. S., Manhattan, Kan. At home.
Hortense L. (Houston) Martin, B. S., Miami, I. T. Housewife.
Jacob Lund, M. S., Manhattan, Kan. Engineer, Kansas State Agricultural College.
Katie I. (Meguire) Sheldon, B. S., Riverside, Cal. Housewife.
J. Dana Needham, B. S., Lane, Kan. Merchant.
Milan T. Ward, B. S., M. D., Orion, Ill. Physician.
Julius T. Willard, M. S., Manhattan, Kan. Professor of applied chemistry, Kansas State Agricultural College.

1884.

Emmett S. Andress, B. S., Lakin, Kan. Farmer.
Florence J. Brous, B. S., 704 St. Paul street, Kansas City, Kan. Teacher.
Bartholomew Buchli, M. S., D. V. S., Alma, Kan. Teacher and farmer.
John H. Calvin, B. S., LL. B. Died in 1898.
Wm. A. Corey, B. S., Salt Lake City, Utah. Teacher and editor.
Henry M. Cottrell, M. S., Manhattan, Kan. Professor of agriculture, Kansas State Agricultural College.
Carrie F. (Donaldson) Brown, B. S., Portland, Oregon. Housewife.
Florence A. Donaldson, B. S. Died in August, 1888.
Frank W. Dunn, B. S., Alman, Colo. Assayer.
I. Day Gardiner, B. S. Died in 1899.
Edwin H. Kern, B. S., Cripple Creek, Colo. Mining engineer.
Marion M. Lewis, B. S. Died in ——.
Charles L. Marlatt, M. S., 1440 Massachusetts avenue, Washington, D. C. First assistant in entomological division, United States department of agriculture.
Lincoln H. Neiswender, B. S., Silver Lake, Kan. Farmer.
Geo. C. Peck, B. S., Junction City, Kan. Miller.
Hattie L. (Peck) Berry, B. S., Jewell City. Kan. Housewife.
John W. Shartel, B. S., Oklahoma City, Okla. Lawyer.

1885.

Thomas Bassler, B. S., Batchelder, Okla. Horticulturist.
Albert Deitz, B. S., 2402 Fairmount avenue, Kansas City, Mo. Merchant.
George E. Hopper, M. S., Arkansas City, Kan. Superintendent of water-works.
Florence F. Hough, B. S., Great Bend, Kan.
Frank A. Hutto, B. S., Stillwater, Okla. Professor of history and economics, Oklahoma Agricultural and Mechanical College.
J. Allen Lewis, M. S., C. E.. 288 South Oakley avenue, Chicago, Ill. Civil engineer.
Nellie J. Murphy, B. S., South Denver, Colo. Trained nurse.
Arthur L. Noyes, B. S., Wabaunsee, Kan. Farmer.
Clarence D. Pratt, B. S., Dallas, Tex. General agent paint company.
Rollin R. Rees, B. S., Minneapolis, Kan. Attorney and member of legislature.
Frederick J. Rogers, M. S., Ithaca, N. Y. Instructor in physics, Cornell University.
Dorothy E. C. (Secrest) Hungerford, B. S., Randolph, Kan. Housewife.
Grace Wonsetler, B. S., Chicago, Ill. Medical student.
Effie E. (Woods) Shartel, B. S., Oklahoma City, Okla. Housewife.

1886.

Lillie B. Bridgeman, M. S., San Diego, Cal. Teacher of science.
Louis P. Brous, M. S., 800 Minnesota avenue, Kansas City, Kan. Teacher of sciences in high school.
Paul H. Fairchild, B. S., M. D., 100 William street, New York city. Publisher of medical journals, and president of Pulvola Chemical Company.
Abbott M. Green, B. S., Adin, Cal. Civil engineer and teacher.
James G. Harbord, M. S., Manzanillo, Cuba. Lieutenant Tenth cavalry, U. S. A.
John U. Higinbotham, B. S., National Home Insurance building, 205 La Salle street, Chicago, Ill. Cashier biscuit manufacturing company.
Maria C. (Hopper) Getty, B. S., Downs, Kan. Housewife.
E. Ada (Little) MacEwan, B. S., Logan, Utah. Housewife.
Frank L. Parker, B. S., Hutchinson, Kan. Merchant.
Edward H. Perry, B. S., Perry, Okla. Editor and publisher.
H. Augustus Platt, B. S., Manhattan, Kan. Farmer.
Ada H. (Quinby) Perry, B. S., Perry, Okla. Housewife.
Ida H. (Quinby) Gardiner, Wakefield, Kan. Housewife.
Minnie Reed, M. S., 2226 Chapel street, Berkeley, Cal. Postgraduate student, university.
David G. Robertson, B. S., 918 and 950 Marquette building, 204 Dearborn street, Chicago, Ill. Lawyer.
Edward O. Sisson, B. S., Peoria, Ill. President Bradley Polytechnic Institute.
John W. Van Deventer, B. S., Sterling, Colo. Editor and publisher.
George W. Waters, B. S., Dillon, Colo. Ranchman.
William E. Whaley, B. S., 5418 Greenwood avenue, Chicago, Ill. Instructor in history, South Side school.
F. Henrietta (Willard) Calvin, B. S., Topeka, Kan. Housewife.
John L. Wise, B. S., Smithboro, Ill. Merchant.

1887.

Edgar A. Allen, B. S., Albuquerque, N. M. Superintendent of Indian school.
Fred H. Avery, B. S. Died in 1896.
Claude M. Breese, M. S., Manhattan, Kan. County clerk.
John B. Brown, M. S., Lawrence, Kan. Teacher, Haskell Institute.
Walter J. G. Burtis, B. S., Fredonia, Kan. Farmer.
Mark A. Carleton, M. S., Washington, D. C. Assistant in division of vegetable pathology, U. S. department of agriculture.
Nellie E. (Cottrell) Stiles, B. S., Lakeside, Cal. Housewife.
Bert R. Elliott, B. S., Dyea, Alaska. Merchant and freighter.
Frederick B. Elliott, B. S., Manhattan, Kan. Real-estate and insurance agent.
Clara M. Keyes, B. S., Warner, Cal. Teacher.
Fred. G. Kimball, B. S., St. Michaels, Alaska. Railway postal clerk.
Frederick A. Marlatt, B. S., Manhattan, Kan. Proprietor Blue Valley Manufacturing Company.
William J. McLaughlin, B. S., Randolph, Utah. Editor.
Mary E. Moses, B. S., Manhattan, Kan. At home.
Charles A. Murphy, B. S., Kingman, Kan. Superintendent of schools.
Orlando G. Palmer, B. S., LL. M., Perry, Okla. Superintendent of schools.
Louis B. Parker, B. S. Died in 1889.
James E. Payne, M. S., Cheyenne Wells, Colo. Superintendent Rainbelt Experiment Station.
Seward N. Peck, B. S., Topeka, Kan. Cabinet-maker, railroad shops.
George N. Thompson, B. S., Belmond, Iowa. Mechanic.
Willis M. Wright, B. S., Jennings, La. Farmer.

1888.

Grant Arnold, B. S., Toledo, Wash. Teacher.
Bertha H. Bacheller, M. S., Kansas City, Mo. Teacher of domestic science, manual training school.
Clement G. Clarke, B. S., 219 York street, New Haven, Conn. Instructor, Yale University.
Alexander C. Cobb, B. S., Wagoner, I. T. Farmer and carpenter.
Mattie (Cobb) Clarke, B. S., New Haven, Conn. Housewife.
Minnie H. Cowell, B. S., Castle View Styning, Sussex, England. Hospital nurse.
Lyman H. Dixon, B. S., Buffalo, N. Y. Architect.
David G. Fairchild, M. S., Washington, D. C. Botanist, experiment station.
Carl E. Friend, B. S., Soldier, Kan. Banker.
John R. Harrison, B. S., Salina, Kan. Inspector of post-offices.
Humphrey W. Jones, B. S., 1251 Lincoln street, Topeka, Kan. Teacher.
Nathan E. Lewis, B. S., 149 East Fifth street, Plainfield, N. Y. Draughtsman.
Abbie L. Marlatt, M. S., 261 Benefit street, Providence, R. I. Teacher of domestic science, manual training school.
William C. Moore, B. S., Junction City, Kan. Editor and publisher.
Ernest F. Nichols, B. S., Hanover, N. H. Professor of physics, Dartmouth College.
Harry E. Robb, B. S., Eureka, Kan. Farmer aud county surveyor.
Anna Snyder, B. S., Emporia, Kan. Student, State Normal School.
Edwin H. Snyder, B. S., Denver, Colo. Editor and publisher.
Oliver L. Utter, B. S., 72 Mt. Vernon street, Boston, Mass. Student in Boston University.
Aaron Walters, B. S. Died in 1892.
Lora L. Waters, M. S., Manhattan, Kan. Teacher.
Daniel W. Working, jr., B. S., 808 Equitable building, Denver, Colo. Assistant secretary, Ballarat-Smuggler Mining and Milling Company.

1889.

Emma A. Allen, B. S. Died in 1891.
Joseph W. Bayles, B. S., Manhattan, Kan. Farmer.
Walter R. Browning, B. S., Padonia, Kan. Grain dealer.
David E. Bundy, B. S., Randolph, Kan. Minister.
Samuel S. Cobb, B. S., Wagoner, I. T. Cattle dealer.
Judson H. Criswell, B. S., Manhattan, Kan. Sales clerk.
Mattie I. (Farley) Carr, B. S., Winthrop, Wash. Housewife.
Clarence E. Freeman, M. S., Chicago, Ill. Associate professor electrical engineering and technology, Armour Institute.
Hattie L. (Gale) Sanders, B. S., Mangona, Fla. Housewife.
John S. Hazen, B. S., Springfield, Mo. United States weather bureau observer.
Albert B. Kimball, B. S., Scandia, Kan. Editor and postmaster.
William Knabb, B. S., Hiawatha, Kan. Assistant bank cashier.

Mary C. Lee, B. S., Lawrence, Kan. Student, State University.
Alonzo A. Mills, B. S., Kamas, Utah. Manager of creamery.
Susan W. Nichols, B. S., 637 North Tenth street, St. Joseph, Mo. Music teacher.
Walter H. Olin, M. S., Ottawa, Kan. Superintendent of city schools.
Eli M. Paddleford, B. S., Boston, Mass. Minister.
Maude F. Sayers, B. S., Ottawa, Kan. Bookkeeper.
Florine (Secrest) Linderman, Willow Glen, San Jose, Cal. Housewife.
Stanley Snyder, B. S., Oskaloosa, Kan. Farmer.
Charles W. Thompson, B. S., D. D. S., Holton, Kan. Dentist.
Jane C. Tunnell, B. S., Mt. Carroll, Ill. Teacher.
Ina M. (Turner) Bruce, B. S., St. Louis, Mo. Housewife.
Robert U. Waldraven, B. S., Rosedale, Kan. Minister.
Henry S. Willard, B. S., M. D., Manhattan, Kan. Physician and druggist.

1890.

Samuel I. Borton, B. S., Hilltop, Kan. Teacher.
Frank A. Campbell, B. S., Highlands, Colo. Reporter.
Arthur F. Cranston, B. S., Parsons, Kan. Lawyer.
John Davis, B. S., Alva, Okla. Professor of English and literature, Oklahoma Normal School.
Grant W. Dewey, B. S., Manhattan, Kan. Photographer.
Charles J. Dobbs, B. S., Central National Bank building, Topeka, Kan. Lawyer.
Charles W. Earle, B. S., 917 E street, Denver, Colo. Advertising agent.
Schuyler C. Harner, B. S , Leonardville, Kan. Teacher and farmer.
John W. Ijams, B. S., Orlando, Okla. Teacher.
Bertha S. (Kimball) Dickens, M. S., Manhattan, Kan. Housewife.
Harriet E. (Knipe) Curtis, B. S., Manhattan, Kan. Housewife.
Nellie P. (Little) Dobbs, B. S., Topeka, Kan. Housewife.
Ellsworth Thomas Martin, B. S., LL. B., Chicago, Ill. Lawyer.
Silas C. Mason, M. S., Berea, Ky. Professor of horticulture and biology, Berea College.
Wilton L. Morse, B. S., Mancos, Colo. Farmer.
Albert E. Newman, B. S., Watonga, Okla. County superintendent and editor.
Julia R. Pearce, B. S., Santa Cruz, Cal. Journalist.
Emil C. Pfuetze, B. S., Randolph, Kan. Lumberman.
William H. Sanders, B. S., Mangona, Fla. Plumber and builder.
Emma Secrest, B. S. Died in 1898.
Marie Barbara Senn, M. S., Fargo, N. D. Instructor in domestic economy, State Agricultural College.
Ralph Snyder, B. S., Oskaloosa, Kan. Farmer and stockman.
George E. Stoker, B. S., A. B., Topeka, Kan. Lawyer.
Walter T. Swingle, M. S. Traveling in Europe for division of vegetable pathology, U. S. department of agriculture.
Gilbert J. Van Zile, B. S. Died in 1899.
Harry N. Whitford, B. S., 6514 Kimbark avenue, Chicago, Ill. Instructor in Armour Institute.
Thomas E. Wimer, B. S. Died in 1890.

1891.

William Aaron Anderson, Kansas City, Mo. Bookkeeper.
William Sherman Arbuthnot, B. S., D. V. S., Republic, Kan. Veterinary surgeon and druggist.
Herman William Avery, B. S., Wakefield, Kan. Farmer and merchant.
Judd Noble Bridgman, M. S., Manila. Twentieth Kansas volunteers.
Robert James Brock, B. S., Manhattan, Kan. Lawyer and county attorney.
Francis Charles Burtis, M. S., Stillwater, Okla. Professor of agriculture, Oklahoma Agricultural and Mechanical College.
Charles Albert Campbell, B. S., 1947 North Seventh street, Philadelphia, Pa. Minister.
Spencer Norman Chaffee, B. S., Manhattan, Kan. Principal preparatory school, Kansas State Agricultural College.
Ephraim Clay Coburn, B. S., 422 N. Fourth street, Kansas City, Kan. Student of medicine.
Gertrude Coburn, B. S., Ames, Iowa. Professor of domestic science, Iowa State College.
Tina Louise (Coburn) Tomson, B. S., Cedar Rapids, Iowa. Housewife.
Rachel Callie (Conwell) Thoburn, B. S., Washington, D. C. Housewife.
Christine Mossman Corlett, B. S., Guthrie, Okla. Teacher.
Mary Emmeline (Cottrell) Payne, M. S., Cheyenne Wells, Colo. Housewife.
Phil Sheridan Creager, B. S., Kansas City, Mo. Telegraph editor, Kansas City *Journal.*
Kary Cadmus Davis, B. S., 69 Eddy street, Ithaca, N. Y. Student, Cornell University.
Thomas Clarke Davis, B. S., Benedict, Kan. Farmer.
Helen Pearl (Dow) Peck, B. S., 756 Jefferson avenue, Brooklyn, N. Y. Housewife.

Anna (Fairchild) White, B. S., 61 Poplar street, Brooklyn, N. Y. Housewife.
Harry Benson Gilstrap, B. S., Chandler, Okla. Editor and publisher.
Almon Arthur Gist, B. S., Fort Riley, Kan. Telegraph operator and station agent.
Amy Myrtle Harrington, B. S., Junction City, Kan. Teacher.
Delpha May Hoop, B. S., Manhattan, Kan. Teacher.
Mayme Amelia (Houghton) Brock, B. S., Manhattan, Kan. Housewife.
Willis Wesley Hutto, B. S., Riley, Kan. Teacher.
George Victor Johnson, B. S., Sedan, Kan. Editor.
Frank Mullett Linscott, B. S., D. V. S., Holton, Kan. Stock-raiser.
Bessie Belle Little, B. S., 425 Taylor street, Topeka, Kan. Teacher of physical culture.
Albert Edward Martin, B. S., Streator, Ill. Manager telephone company.
Nellie Evangeline (McDonald) Thayer, B. S., Manhattan, Kan. Housewife.
David Collins McDowell, B. S., Elkton, Colo. Merchant.
Alfred Midgley, B. S., Minneapolis, Kan. Clerk.
Madeleine Wade Milner, B. S., 6514 Kimbark avenue, Chicago, Ill. Assistant librarian, Armour Institute.
Paul Chambers Milner, B. S., 6514 Kimbark avenue, Chicago, Ill. Assistant exchange teller, Illinois Trust and Saving Bank.
Harry Elbridge Moore, B. S., Kansas City, Mo. Commission merchant.
John Otis Morse, B. S., Mound City, Kan. Farmer and teacher.
Hattie May Noyes, B. S., Wabaunsee, Kan. Teacher.
Louise Reed, B. S., 112 National avenue, San Diego, Cal. Principal of kindergarten.
Artemus Jackson Rudy, B. S., Fresno, Cal. Fruit-raiser.
Henry Vernon Rudy, B. S., Fresno, Cal. Fruit-raiser.
Charlotte Jane Short, M. S., Manhattan, Kan. Assistant in household economics, Kansas State Agricultural College.
Ben Skinner, B. S., M. D., Granada, Kan. Physican.
Caroline Scott (Stingley) Van Blarcom, B. S. Died in 1899.
Lillian Alice St. John, B. S., Manhattan, Kan. Teacher.
Ellis Cheney Thayer, B. S., Manhattan, Kan. Farmer.
Sam L. Van Blarcom, B. S., M. D., 2024 Walnut street, Kansas City, Kan. Railway postal clerk.
Frank Albert Waugh, M. S., Burlington, Vt. Professor of horticulture in Vermont University.
Fannie Elizabeth (Waugh) Davis, M. S., Ithaca, N. Y. Housewife.
Flora Emilie Wiest, B. S., Manhattan, Kan. Teacher.
Bertha (Winchip) Spilman, B. S., 509 Second street, S. E., Washington, D. C. Housewife.
Alfred Orin Wright, B. S., Lake Arthur, La. Editor.
Effie Jeanetta Zimmerman, M. S., Moray, Kan. Teacher and horticulturist.

1892.

Grace Maria Clark, M. S., Berea, Ky. Clerk in president's office, Berea College.
George L. Clothier, B. S., Manhattan, Kan. Assistant in botany, experiment station, Kansas State Agricultural College.
Lillian Clyde Criner, B. S., McPherson, Kan. Editor.
Harry Darnell, B. S., Gardner, Kan. Teacher.
William H. Edelblute, B. S., Harrison, Idaho.
Elizabeth (Edwards) Hartley, B. S., Manhattan, Kan. Housewife.
John Frost, B. S., Blue Rapids, Kan. Teacher.
Effie (Gilstrap) Frazier, B. S., Chandler, Okla. Housewife.
Ava (Hamill) Tillotson, M. S., Hill City, Kan. Housewife.
J N Harner, B. S. Died in 1897.
Loyall S. Harner, B. S., Junction City, Kan. Farmer.
Charles Pinckney Hartley, B. S., Manhattan, Kan. Postgraduate student and assistant, Kansas State Agricultural College.
John William Abraham Hartley, B. S., Manhattan, Kan. Farmer.
James Laird McDowell, B. S., Cripple Creek, Colo. Miner.
Robert A. McIlvaine, B. S., Durham, Kan. Principal of schools.
Kate (Oldham) Sisson, B. S., Manhattan, Kan. Housewife.
Daniel Henry Otis, M. S., Manhattan, Kan. Assistant in dairying, Kansas State Agricultural College.
Ivan Bryan Parker, B. S., M. D., Hill City, Kan. Physician, and president Graham County State Bank.
Warner S. Pope, B. S. Died in 1899.
Burton Homer Pugh, B. S., Oakland, Kan. Farmer.
Elias W. Reed, B. S., St. Clere, Kan. Farmer.
Robert Stirling Reed, B. S., Emporia, Kan. Student, State Normal School.
Arthur Daniel Rice, B. S., Granada, Colo. Minister.

Fred. C. Sears M. S., Wolfville, Nova Scotia. Director of provincial school of horticulture.

Birdie E. Secrest, B. S., Randolph, Kan. Clerk.

May Secrest, B. S., San Francisco, Cal. Teacher, postgraduate student, and student artist.

Ruth Tipton (Stokes) Sears, M. S., Wolfville, Nova Scotia. Housewife.

Harry W. Stone, B. S., Portland, Ore. General secretary Y. M. C. A.

Walter Percival Tucker, B. S., San Antonio, Tex. Bookkeeper.

Mary Alice (Vail) Waugh, B. S., Burlington, Vt. Housewife.

Robert Lynn Wallis, B. S. Died in 1895.

Ora Rebecca (Wells) Traxler, B. S., Waterville, Kan. Housewife.

Daniel F. Wickman, B. S., P. O. box 107, Topeka, Kan. Clerk in Santa Fe railroad offices.

George Washington Wildin, B. S., Savannah, Ga. Mechanical engineer.

Charles Ernest Yeoman, B. S., La Crosse, Kan.

1893.

Edmund Clarence Abbott, B. S., Red River, N. M. Lawyer.

Edwin McMaster Stanton Curtis, B. S., Equitable building, St. Louis. Clerk in Missouri Pacific railroad office.

Corinne Louise (Daly) Burtis, B. S., Stillwater, Okla. Housewife.

Laura Greeley Day, B. S., Menominee, Wis. Instructor in household economy, Stout Manual Training School.

Ione (Dewey) Sutherland, B. S., Chicago, Ill. Housewife.

Albert Dickens, B. S., Manhattan, Kan. Assistant horticulturist, Kansas State Agricultural College.

Mary Maud Gardiner, M. S., Ames, Iowa. Instructor in domestic economy, Iowa State College.

Susie (Hall) Linscott, B. S., Holton, Kan. Housewife.

Mary Frances Burgoyne Harman, B. S., Olathe, Kan. Teacher, deaf and dumb asylum.

Ivy Frances Harner, M. S., Ruston, La. Teacher of domestic science, Louisiana Industrial Institute.

Margaretha Elise Horn, B. S., Dr. O., 397 McKinstry avenue, Detroit, Mich. Teacher of sciences, Detroit high school.

Marcia Ione Hulett, B. S., Akron, Ohio. Osteopathist.

Mac F. Hulett, B. S, 120 East Gay street, Columbus, Ohio. Osteopathist.

Fred Hulse, B. S., Manhattan, Kan. Teamster, Kansas State Agricultural College farm.

Charles Augustus Kimball, B. S., Courtland, Kan. Publisher.

Maud Ethel Knickerbocker, B. S., Terraville, S. D. Teacher.

Thomas Eddy Lyon, B. S., 507 Hill street, Ann Arbor. Student of law.

William Otis Lyon, B. S., Emporia, Kan. Teacher.

McLeod Wilson McCrea, B. S., Winchester, Kan. Teacher.

Rose Edith McDowell, B. S., Manhattan, Kan. At home.

George Lane Melton, B. S., Winfield, Kan. Insurance and loan agent.

Eusebia DeLong Mudge, B. S., 410 Olive street, Kansas City, Mo. At home.

Nora (Newell) Hatch, B. S., Manhattan, Kan. Housewife.

August Fred. Niemoller, B. S., Stitt, Kan. Teacher.

Susie Amanda Noyes, B. S. Died in 1894.

Henry Leamer Pellett, B. S., 1524 Chestnut street, Philadelphia, Pa. Physician.

Charles John Peterson, B. S., Topeka, Kan.

Carl Frederic Pfuetze, B. S., Manhattan, Kan. Railway postal clerk.

John Dewitt Riddell, B. S., M. D., Enterprise, Kan. Physician.

John Albert Rokes, B. S., Holton, Kan. Lawyer.

Agnes (Romick) Edgar, B. S., Halford, Kan. Housewife.

Fred. Raymond Smith, B. S., Manhattan, Kan. Lawyer and court stenographer.

George Wildman Smith, B. S., Manhattan, Kan. Medical student.

William Elmer Smith, B. S., Manhattan, Kan. Law student.

John Eugene Thackrey, B. S., Chapman, Kan. Minister.

Joseph B. Thoburn, B. S., Washington, D. C. Division of forestry.

Charles Henry Thompson, B. S., St. Louis, Mo. Missouri Botanical Garden.

George K. Thompson, B. S., Beattie, Kan. Teacher.

William James Yeoman, B. S.

1894.

Frank Weber Ames, B. S., 5323 Jackson avenue, Chicago, Ill. Clerk, National Steel Company.

Clara Francelia Castle, M. S., Manhattan, Kan. At home.

George Luther Christensen, B. S., Houghton, Mich. Instructor in mechanical engineering and drawing, Michigan School of Mines.

John Cornelius Christensen, B. S., Manhattan, Kan. Assistant county treasurer.

Lorena Estella Clemons, B. S., Manhattan, Kan. Secretary Kansas State Agricultural College.

Martha Cottrell, B. S., Wabaunsee, Kan. At home.
Sarah Esther (Cottrell) Wright, B. S., Jennings, La. Housewife.
Alverta May Cress, B. S., Manhattan, Kan. At home.
Fannie Jane Cress, B. S., 71 Walton Place, Chicago, Ill. Artist.
Ernest A. Donaven, B. S., M. D., Goodrich, Kan. Physician.
Jephthah W. Evans, B. S., Manhattan, Kan. Medical student.
Isabelle Russell Frisbie, B. S., Brookings, S. D. Professor of domestic economy, State Agricultural College.
Eugene Leonard Frowe, B. S. Died in 1898.
Walter Harling, B. S., Lehi, Utah. Principal of New West Academy.
Lorena Marguerite Helder, B. S., Manhattan, Kan. Assistant in music, Kansas State Agricultural College.
Mark V. Hester, B. S., Lawrence, Kan. Student, State University.
Charles Ross Hutchings, B. S., Massachusetts building, Kansas City, Mo. Bridge builder, Kansas City Bridge Company.
Isaac Jones, jr., B. S., Klondike, Alaska. Miner.
Stella Victoria Kimball, B. S., Manhattan, Kan. Teacher.
Mary Eliza Lyman, B. S., 116 High street, Peoria, Ill. Assistant in domestic science, Bradley Polytechnic Institute.
William Henry Moore, B. S., Manhattan, Kan. Foreman of greenhouses, Kansas State Agricultural College.
Sarah (Moore) Foster, B. S., Mont Ida, Kan. Housewife.
James Francis Odle, B. S., Madison, Wis. Student, university.
Charles Randolph Pearson, B. S., Hoxie, Kan. Teacher.
Horace Greeley Pope, B. S., 406-407 Massachusetts building, Kansas City, Mo. Lawyer.
Minnie Louisa Romick, B. S, Niles, Kan. At home.
Winnie Luella (Romick) Chandler, B. S., Argentine, Kan. Housewife.
Victor Irvin Sandt, B. S., Home, Kan. Teacher.
John Alfred Scheel, B. S., Klondike, Alaska. Miner.
Jacob Ulrich Secrest, B. S., Randolph, Kan. Farmer.
Charles Chrisfield Smith, B. S., Palo Alto, Cal. Student, Leland Stanford University.
Jennie Ruth Smith, B. S., Manhattan, Kan. Teacher in city schools.
Wesley Ohio Staver, B. S., 625 New York Life building, Kansas City, Mo. Lawyer.
John Stingley, B. S., 402 Aldeen Court, Kansas City, Mo. Freight offices.
John Edwin Taylor, B. S. Died in 1896.
Delbert L. Timbers, B. S., Beloit, Kan. Teacher
Phebe Carey Turner, B. S., Vera, Kan. Teacher.
Samuel Robert Vincent, B. S., Oric, Okla. Teacher.
Lucy Helena Waters, B. S., Palo Alto, Cal. Postgraduate student, Leland Stanford University.

1895.

Edward Jones Abell, B. S., Smith Center, Kan. Principal of schools.
Carl D. Adams, B. S., Olathe, Kan. Teacher, asylum for deaf and dumb.
Robert John Barnett, B. S., Manhattan, Kan. Principal of Central school.
Burton Wesley Conrad, B. S., Capioma, Kan. Farmer.
Florence Ruth Corbett, B. S., Brooklyn, N. Y. Student, Pratt Institute.
Sid Henry Creager, B. S., Kansas City, Mo. Railway postal clerk.
Elsie Emeline Crump, B. S., Manhattan, Kan. Teacher.
David Thomas Davies, B. S., Manhattan, Kan. Farmer.
Frank Andrew Dawley, B. S., Waldo, Kan. County clerk.
Daisy Day, M. S., Manhattan, Kan. At home.
Flora (Day) Barnett, B. S., Manhattan, Kan. Housewife.
George Adam Dean, B. S., Topeka, Kan. Farmer.
Lillie Christena Dial, B. S., Cleburne, Kan. Teacher.
Lucy Ellis, B. S., 705 Lane street, Topeka, Kan. Teacher.
Victor Emrick, B. S., 104 North Twelfth street, Portland, Ore. Auditor passenger department, Oregon Transportation and Navigation Company.
George Forsyth, B. S., Franklin, Ind. Sales agent.
Ernest Harrison Freeman, B. S., Topeka, Kan.
Florence Eleanor Fryhofer, B. S., Randolph, Kan. At home.
George William Fryhofer, B. S., Ellettsville, Ind. Banker.
Oscar Hugo Halstead, B. S., 218 South Sixth street, St. Joseph, Mo. Merchant.
Hortensia (Harman) Patten, B. S., Sycamore, Ill. Housewife.
John Bright Harman, B. S., Valley Falls, Kan. Farmer.
Clarence V. Holsinger, B. S., Rosedale, Kan. Fruit-raiser.

Christian Andrick Johnson, B. S., St. Louis, Mo. Medical student.
John James Johnson, B. S., St. Louis, Mo. Medical student.
Fred. Ralph Jolly, B. S., Manhattan, Kan. Newspaper reporter.
William Irvin Joss, B. S., Fairview, Kan. Teacher.
Maud Estella Kennett, B. S., Silver Lake, Kan. Teacher.
Myron Arthur Limbocker, B. S., 401 Portsmouth building, Kansas City, Kan. Lawyer.
Samuel Alexander McDowell, B. S., Elkton, Colo. Clerk.
Laura Sarah (McKeen) Smith, B. S., Russell, Kan. Housewife.
Theo. Wattles Morse, M. S., Kansas City, Mo. Journalist.
Oscar Albert Otten, B. S., Pierce Junction, Kan. Telegraph operator.
William Hackworth Painter, B. S., Lakeland, Kan. Stockman.
Charles Wesley Pape, B. S., Manhattan, Kan. Assistant in zoology, Kansas State Agricultural College.
Ethel (Patten) Ames, B. S., 5323 Jackson avenue, Chicago, Ill. Housewife.
John Vernon Patten, B. S., Sycamore, Ill. Manufacturer.
William H. Phipps, B. S., Manhattan, Kan. Secretary Kansas State Agricultural College.
Alice Julia (Quintard) Peck, B. S., Dallas, Texas. Housewife.
Frederick Ellsworth Rader, B. S., Manhattan, Kan. Farmer.
Ralph Waldo Rader, B. S., Manhattan, Kan. Farmer and teacher.
Ada Rice, B. S., Manhattan, Kan. Assistant in preparatory department, Kansas State Agricultural College.
Benjamin Franklin Simeon Royer, B. S., St. Joseph, Mo. Physician.
Charles Baxter Selby, B. S., Marion, Va. Lawyer.
Mabel Gertrude Selby, B. S., Argentine, Kan. Teacher.
Ernest P. Smith, B. S., Manhattan, Kan. Mechanic.
Frederick John Smith, B. S., Russell, Kan. Editor.
Kitty Myrtle (Smith) Wheeler, B. S., 66 East 122d street, New York city. Housewife.
Marietta Smith, B. S., Topeka, Kan. Student, Washburn College.
William Henry Steuart, B. S., Victor, Colo. Mining engineer.
Cora Idella Stump, B. S., Manhattan, Kan. Teacher.
Dora (Thompson) Winter, B. S., Blue Rapids, Kan. Housewife.
Elven Creveling Trembly, B. S., Comiskey, Kan. Farmer.
George Carpenter Wheeler, B. S., 66 East One Hundred and Twenty-second street, New York city. Railroad conductor.
Mary Elizabeth (Willard) Emrick, B. S., 104 North Twelfth street, Portland, Ore. Housewife.
Olive Mabel (Wilson) Holsinger, B. S., Rosedale, Kan. Housewife.
Ora Gertrude Yenawine, B. S., Manhattan, Kan. Assistant in sewing, Kansas State Agricultural College.

1896.

May Haines Bowen, B. S., Topeka, Kan. Student, Washburn College.
Con Morrison Buck, B. S., Wichita, Kan. Civil engineer on Santa Fe railroad.
Margaret Isaphene (Carlton) Doane, B. S., College Park, Md. Housewife.
William Annesley Cavenaugh, B. S., Fort Leavenworth, Kan. Second lieutenant company I, Twentieth infantry.
William Arthur Coe, B. S., Coloma, Kan. Farmer.
Charlotte Mabel (Cotton) Smith, B. S., Manhattan, Kan. Housewife.
Ernest Brown Coulson, B. S., Alva, Okla.
George Henry Dial, B. S., Cleburne, Kan. Teacher and farmer.
Charles Francis Doane, B. S., College Park, Md. Assistant bacteriologist.
John Berthold Dorman, B. S., box 206, Saratoga, N. Y. Teacher.
Bradford Dougherty, B. S., Kansas City, Kan. Collector.
Charles Silar Evans, B. S., Manila, P. I. Hospital corps.
Robert Kilby Farrar, B. S., Axtell, Kan. Teacher.
George William Finley, B. S., Manhattan, Kan. Teacher.
Joanna Freeman, B. S. Died in 1897.
John Jacob Fryhofer, B. S., Randolph, Kan. Farmer.
Elmer George Gibson, B. S., Willard, Kan. Teacher.
George Clifton Hall, B. S., Manhattan, Kan. Teacher and law student.
Alonzo Charles Havens, B. S., Dwight, Kan. Farmer.
Gertrude Julia (Havens) Norton, B. S., St. Louis, Mo. Housewife.
Lawrence Wilbur Hayes, B. S., 1028 Kansas avenue, North Topeka, Kan. Attendant, asylum for insane.
John Warren Holland, B. S., San Francisco, Cal.
Henry George Johnson, B. S., 358 Marsfield street, Chicago, Ill. Student in dentistry.
Susan Effie (Johnson) Cooper, B. S., Success, Kan. Housewife.

Marion Elizabeth Jones, B. S., Manhattan, Kan. Teacher.
Thomas Lormar Jones, B. S., 1000 Walnut street, Kansas City, Mo. Piano tuner.
Edward Clarence Joss, B. S., Fairview, Kan. Hardware merchant.
Royal S. Kellogg, B. S., Manhattan, Kan. Postgraduate assistant.
Mark Kirkpatrick, B. S., Fredonia, Kan. United States land surveyor.
Edith Lynette Lantz, B. S., Chapman, Kan. At home.
Sue Long, B. S., Manhattan, Kan. At home.
Charles W. Lyman, B. S., Salina, Kan.
Charles Dwin McCauley, B. S., 417 Madison street, Topeka, Kan. Draughtsman.
Charles Sumner Marty, B. S., Merriam, Kan. Farmer.
Elda Lenore (Keen) Moore, B. S., Manhattan, Kan. Housewife.
Arthur Houston Morgan, B. S., Hillside, Kan. Farmer and teacher.
Clara Verena Newell, B. S., Manhattan, Kan. Clerk.
Ellen Elizabeth Norton, B. S., Manhattan, Kan. Postgraduate student, Kansas State Agricultural College, and general secretary Young Women's Christian Association.
John Bitting Smith Norton, B. S., St. Louis, Mo. Assistant in Missouri Botanical Garden.
Hattie A. Paddleford, B. S., Randolph, Kan. Teacher.
Mary Kerilla (Painter) Rogers, B. S., Ashland, Kan. Housewife.
Elva Luthera (Palmer) Thackrey, B. S., Chapman, Kan. Housewife.
Inez Luella (Palmer) Barrows, B. S., Washington, Kan. Housewife.
Fannie Parkinson, B. S., Princeton, Kan. Teacher.
Archie Carpenter Peck, B. S., Big Valley, Tex. Manager and proprietor of cotton-gin.
Arthur Louis Peter, B. S., 418 Mock building, Denver, Colo. Student, medical college.
Charles Edwin Pincomb, B. S., Hector, Kan. Stockman.
Mary Josephine Pincomb, B. S., Hector, Kan. At home.
John Poole, B. S., Briggs, Kan. Farmer.
Edgar Arthur Powell, B. S., Osage City, Kan. Farmer and stock-raiser.
Lisle Willits Pursel, B. S., corner Fourth and Maine streets, Joplin, Mo.
Howard Newton Rhodes, B. S., Manhattan, Kan. Clerk in post-office.
Ambrose Elliott Ridenour, B. S., Randolph, Kan. Farmer.
Mary Etta Ridenour, B. S., Manhattan, Kan. Bookkeeper.
Isaac Archie Robertson, B. S., Marshall, Mo. Telegraph operator.
Grace Anna Secrest, B. S., Randolph, Kan. Teacher.
Carl Snyder, B. S., Oskaloosa, Kan. Farmer.
Max Gilbert Spalding, B. S., 1319 Broadway, Kansas City, Mo. Shipping clerk.
Orville Ashford Stingley, B. S., 721 West Eleventh street, Kansas City, Mo. Meat inspector, Armour's.
Sadie Stingley, B. S., Manhattan, Kan. Teacher.
Gertrude Ella Stump, B. S., Manhattan, Kan. At home.
Miriam Esther Swingle, B. S., 116 High street, Peoria, Ill. Assistant in household economy, Bradley Polytechnic Institute.
William Elwood Thackrey, B. S.. Crestone, Colo. Stock-raiser.
James Dunbar Trumbull, B. S., Manhattan, Kan. Clerk.
Frank Edwin Uhl, B. S., Gardner, Kan. Dairy farmer.
Edwin H. Webster, B. S., Manhattan, Kan. Postgraduate student and assistant, farm department, Kansas State Agricultural College.

1897.

Cora Atwell, B. S., Manhattan, Kan. Teacher.
Roger William Bishoff, B. S., Eudora, Kan. Farmer.
Mary Frances Carnell, B. S., Bunker Hill, Kan. At home.
William Burns Chase, B. S., Hoyt, Kan. Hardware merchant.
Frank E. Cheadle, B. S., Erwin, Okla. Farmer.
Robert Waitman Clothier, B. S., Manhattan, Kan. Assistant in chemistry, Kansas State Agricultural College.
Maggie A. (Correll) Uhl, B. S., Gardner, Kan. Housewife.
Mabel Crump, B. S., Manhattan, Kan. Telephone operator.
Fred Volley Dial, B. S., Cleburne, Kan. Clerk.
Viola Grace Dille, B. S., Edgerton, Kan. At home.
Samuel Dolby, B. S., Longford, Kan. Farmer.
George Doll, B. S., Larned, Kan. Teacher and farmer.
Anna Phillipina Engel, B. S., Manhattan, Kan. At home.
Emma Finley, B. S., Emporia, Kan. Student, State Normal School.
Martha Fox, B. S., Manhattan, Kan. Special student, Kansas State Agricultural College.
Philip Fox, B. S., Manila, P. I. Twentieth Kansas volunteers.

Ned Merrill Green, B. S., Ft. Crook, Neb. United States army.
Mary Eliza Haulenbeck, B. S., Manhattan, Kan. At home.
Lewellyn Gaines Hepworth, B. S., Burlington, Kan. Teacher and farmer.
Ina Emma Holroyd, B. S., Emporia, Kan. Student, State Normal School.
Myrtle Hattie Hood, B. S., Manhattan, Kan. At home.
Charles Henry Hoop, B. S., Belleville, Kan. Confectioner.
Winifred Anna (Houghton) Buck, B. S., Wichita, Kan. Housewife.
Bret Redmon Hull, B. S., Alta Vista, Kan. Lumber dealer.
Clay Berkey Ingman, B. S., Barnes, Kan. Farmer.
Gertrude May Lyman, B. S., Manhattan, Kan. Teacher.
Frederick Hugo Meyer, B. S., Menager, Kan. Farmer.
Valentine Maelzer, B. S., box 26, Salt Lake City, Utah.
Sherman Bodwell Newell, B. S., Zeandale, Kan. Teacher and farmer.
Oliver Ezra Noble, B. S., Manhattan, Kan. County surveyor.
Jesse Baker Norton, B. S., Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.
Mary Augusta Norton. B. S., 912 Taylor avenue, St. Louis, Mo. Nurse, Mayfield Sanatarium.
Bertha Olivia Olson, B. S., Manhattan, Kan. At home.
Hilda Sophia Olson, B. S., Manhattan, Kan. Teacher.
Russell John Peck, B. S., Alma, Kan.
William Oscar Peterson, B. S., Monterey, Kan. Teacher.
Eva Louise Philbrook, B. S., Louisville, Kan.
Rufus M. Philbrook, B. S., Louisville, Kan.
William Joseph Rhoades, B. S., Shockey, Kan. Ranchman.
Carl Rice, B. S., Leavenworth, Kan. United States army.
Thomas Meade Robertson, B. S., Neosho Falls, Kan. Dentist.
Homer Joseph Robison, B. S., Topeka, Kan. Machinist.
Edward Shellenbaum, B. S., Randolph, Kan. Clerk in post-office.
Alice Myrtle Shofe, B. S., 125 Western avenue, Topeka, Kan. Student.
Charles Wesley Shull, B. S., Manhattan, Kan. Farmer.
Alfred Caleb Smith, B. S., Bakersfield, Cal. Student, State University.
Phœbe Jane Smith, B. S., Emporia, Kan. Student, Kansas State Normal School.
Wilhelmina Henrietta Spohr, B. S., Manhattan, Kan. Teacher.
Charles Harrison Stokely, B. S., Sedalia, Mo. Student, Central Business College.
John E. Trembly, B. S., Comiskey, Kan. Farmer.
Harriet Agnes Vandivert, B. S., Ames, Iowa. Postgraduate student, Iowa State College.
Olive Voiles, B. S., Manhattan, Kan. At home.
John Minton Westgate, B. S., Westgate, Kan. Assistant botanist, Kansas State Agricultural College.
Mark Wheeler, B. S., Manila. First lieutenant, Fourth United States infantry.
Clare Annie Wilson, B. S., Mapleton, Kan. Teacher.

1898.

All the following have degree *B. S.:*

Emory Sherwood Adams, Manila. Company M, Twentieth Kansas volunteers.
Joshua William Adams, Cheyenne Wells, Colo. Rain Belt Experiment Station.
Samuel John Adams, general secretary of Kansas State Agricultural College Y. M. C. A., and postgraduate student.
Thomas Walter Allison, Florence, Kan. Farmer and fruit-grower.
William Anderson, Cleburne, Kan. Teacher.
Jessie Geneva Bayless, Yates Center, Kan. At home.
Hope Brady, Manhattan, Kan. Teacher.
Robert Henry Brown, Manhattan, Kan. Assistant in music, Kansas State Agricultural College.
Earl Carver Butterfield, Millbrook, N. Y.
John Alfred Conover, herdsman, farm department, Kansas State Agricultural College.
Minnie Laura Copeland, Manhattan, Kan. Teacher.
Lucy Maria Cottrell, Wabaunsee, Kan. At home.
Anna Magdalena Dahl, Webber, Kan. Teacher.
Inga Josephine Dahl, Webber, Kan. At home.
Cassie Belle Dille, Edgerton, Kan. Teacher.
Emma Phillipine Doll, Larned, Kan. Teacher.
Cora Elizabeth Ewalt, Manhattan, Kan. At home.
Guy Francis Farley, Melvern, Kan. Farmer.
Mary (Finley) Ridenour, Randolph, Kan. Housewife.
Arthur Lorenzo Frowe, Pavilion, Kan. Teacher.

William Logan Hall, Manhattan, Kan. Assistant in horticulture, Kansas State Agricultural College.
Anna Viola Hanson, Manhattan, Kan. Clerk.
Walter Eugene Hardy, 610 Cherokee street, Leavenworth, Kan.
James Madison Harvey, Junction City, Kan. Farmer.
Emmett Vivian Hoffman, Enterprise, Kan. Bookkeeper.
Guy Dudley Hulett, Kirksville, Mo. Student of osteopathy.
Ada Ingman, Barnes, Kan. At home.
Ary Cordelia Johnson, Success, Kan. At home.
Charles Percy King, Eldorado Springs, Mo. Lumberman.
Bessie May Locke, Riley, Kan. Teacher.
Olive Long, Manhattan, Kan. Clerk in secretary's office, Kansas State Agricultural College.
William Andrew McCullough, Delavan, Kan. Farmer.
Inez Isadore Manchester, Chiles, Kan. Teacher.
Florence Adelia Martin, Junction City, Kan. At home.
Henry Alba Martin, Lyndon, Kan. Creamery.
Alice Maude Melton, Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.
George Gerkein Menke, Garden City, Kan. Hotel keeper.
Mary Frances Minis, Manhattan, Kan. Teacher.
May Moore, Manhattan, Kan. At home.
Hattie Grace Nichols, Liberal, Kan. Teacher.
Schuyler Nichols, Liberal, Kan. Medical student.
Lucy Junie Parks, Manhattan, Kan. At home.
Ernest Byron Patten, Silver Lake, Kan. Farmer.
Clara Jeanette Perry, Manhattan, Kan. Assistant in printing-office, Kansas State Agricultural College.
Emilie Matilda Pfuetze, Manhattan, Kan. Teacher.
John Martin Pierce, Healdsburg, Cal.
Raymond Haines Pond, Ann Arbor, Mich. Student, State University.
William Poole, Briggs, Kan. Farmer.
Willis Thomas Pope, Eureka, Kan. Horticulturist.
Nora May Reed, Genoa, Ill. Teacher.
Gertrude Elizabeth Rhodes, Manhattan, Kan. At home.
Henry William Rogler, Matfield Green, Kan. Superintendent stock ranch.
Ferdinand John Rumold, Emporia, Kan. Student, State Normal School.
Martin Wilbur Sanderson, Reedville, Kan. Farmer.
Olive Maria Shelden, Manhattan, Kan. At home.
Edwin Lee Smith, Manhattan, Kan. Teacher.
Oliver Russell Smith, Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.
Bertha Spohr, Olathe, Kan. Teacher in deaf and dumb institution.
Andrew B. Symns, Brenner, Kan. Farmer.
Cora Thackrey, Randolph, Kan. Teacher.
Harriet Emerson Thackrey, Valentine, Neb. Teacher.
Henry Marsden Thomas, Melvern, Kan. Farmer.
Elsie Lucile Waters, Keats, Kan. Teacher.
Fred Dorsey Waters, Dillon, Colo.
Abner Davis Whipple, postgraduate student and assistant, Kansas State Agricultural College.
Adelaide Frances Wilder, Manhattan, Kan. Postgraduate student, Kansas State Agricultural College.
Josephine Hannah Wilder, Manhattan, Kan. At home.
Frank Yeoman, 50 Water-works building, Kansas City, Mo. Law student.
Frederick Zimmerman, Kirksville, Mo. Superintendent dairy farm.

SUMMARY.

The number of graduates up to 1899 is 643, of whom 233 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of bachelor of arts. Since 1877, all have received the degree of bachelor of science, after a four years' course in the sciences, with good English training.

Of the 410 men, 15 are deceased, and the remainder are reported in the following occupations:

Farmers and stock-raisers	73
Fruit-growers, nurserymen, and gardeners	10
Professors and instructors in agricultural colleges	7
President of polytechnic institute	1
College professors not otherwise classified	14
Superintendent of agricultural experiment station	1
Assistants in agricultural experiment stations	3
In United States department of agriculture	5
Assistants in botanical garden	2
In military service	13
In United States government civil service	8
Teachers and students of special sciences	12
Superintendents of public schools	10
Teachers in public schools	38
Teachers in Indian schools	2
Postgraduate students in K. S. A. C	10
Students in other institutions	11
Mechanics	6
Journalists	20
Ministers and secretaries of Y. M. C. A	10
Physicians and students of medicine, druggists, and dentists	25
Lawyers and students of law	28
Civil, electrical, mining and mechanical engineers	7
Architects and builders	4
Other professional men	3
Manufacturers	9
Merchants	24
Bankers	6
General business men	24
Telegraph operators and railroad agents	6
Officials and official clerks	14
Miners	3
Unknown	16
Total	415
In two occupations	20
	395

Of the 233 women, 8 are deceased, and the remainder occupied as follows:

Housewives	82
At home	33
Teachers of household economy	14
Teachers in public schools	55
Teachers and students of special sciences	5
Teachers of art and music	2
Bookkeepers, stenographers, and clerks	14
Milliners and dressmakers	2
Librarian	1
Nurses	3
Postgraduate students in K. S. A. C	6
Students in other institutions	6
Unknown	3
Total	226
In two occupations	1
	225

Announcements for 1899-1900.

Board of Instruction, 1899-1900.

ERNEST R. NICHOLS, A. M. (*University of Iowa*), ACTING PRESIDENT,
Professor of Physics and Electrical Engineering.

JOHN D. WALTERS, M. S. (*Kansas State Agricultural College*),
Professor of Industrial Art and Designing.

ALEXANDER B. BROWN (*Boston Music School*), A. M. (*Olivet*),
Professor of Music.

JULIUS T. WILLARD, M. S. (*Kansas State Agricultural College*),
Professor of Applied Chemistry.

ALBERT S. HITCHCOCK, M. S. (*Iowa State Agricultural College*),
Professor of Botany.

PAUL FISCHER, B. AGR., M. V. D. (*Ohio State University*),
Professor of Veterinary Science.

HENRY M. COTTRELL, M. S. (*Kansas State Agricultural College*),
Professor of Agriculture, Superintendent of Farm.

MISS MARY F. WINSTON, PH. D. (*Goettingen*),
Professor of Mathematics.

FREDRIC AUGUSTUS METCALF, O. M. (*Emerson College of Oratory*),
Professor of Oratory.

GEORGE F. WEIDA, PH. D. (*Johns Hopkins*),
Professor of Pure Chemistry.

MISS MINNIE AVA NELLIE STONER (*Boston Normal School of Household Arts*), B. S. (*South Dakota Agricultural College*),
Professor of Domestic Science, Dean of Women's Department.

JOSEPH D. HARPER, M. S. (*Rose Polytechnic Institute*),
Professor of Mechanical Engineering, Superintendent of Shops.

EDWIN A. POPENOE, A. M. (*Washburn*),
Professor of Horticulture and Entomology, Superintendent of Orchards and Gardens.

....
Professor of History and Economics.

....

Professor of English.

Miss HARRIET HOWELL (*Pratt Institute*),
Superintendent of Domestic Art.

JOSHUA D. RICKMAN, I. T. U.,
Superintendent of Printing.

Miss LORENA E. CLEMONS, B. S. (*Kansas State Agricultural College*),
Secretary.

SEPTIMUS SISSON, S. B. (*Chicago*), V. S. (*Toronto*),
Associate Professor of Veterinary Science.

Miss JOSEPHINE C. HARPER,
Instructor in Mathematics.

Miss ALICE RUPP,
Instructor in English.

ROBERT B. MITCHELL, B. S. (*Kansas State Agricultural College*),
Cadet Major and Acting Commandant. Assistant in Veterinary Science.

....

Instructor in Physical Culture.

Miss JOSEPHINE BERRY,
Librarian.

WILLIAM L. HOUSE,
Foreman of Carpenter Shop.

ENOS HARROLD,
Foreman of Iron Shop.

DANIEL H. OTIS, M. S. (*Kansas State Agricultural College*),
Assistant in Dairying.

Miss LORENA M. HELDER, B. S. (*Kansas State Agricultural College*),
M. T. (*Kansas Conservatory of Music*),
Assistant in Music.

PERCIVAL J. PARROTT, M. A. (*Kansas University*),
Assistant in Entomology.

CHARLES W. PAPE, M. S. (*Kansas State Agricultural College*),
Assistant in Veterinary Science and Biology.

ROBERT W. CLOTHIER, M. S. (*Kansas State Agricultural College*),
Assistant in Chemistry.

Miss MARGARET J. MINIS,
Assistant Librarian.

ROYAL S. KELLOGG, M. S. (*Kansas State Agricultural College*),
General Assistant.

ROBERT H. BROWN, B. S. *Kansas State Agricultural College*),
M. T. (*Kansas Conservatory of Music*),
Assistant in Music.

JOHN M. WESTGATE, B. S. (*Kansas State Agricultural College*),
Assistant in Botany.

Miss MAY SECREST, B. S. (*Kansas State Agricultural College*),
Assistant in Domestic Art.

WM. ANDERSON, B. S. (*Kansas State Agricultural College*),
Assistant in Mathematics.

Miss GERTRUDE BARNES,
Assistant Librarian.

ALBERT DICKENS, B. S. (*Kansas State Agricultural College*),
Assistant in Horticulture.

WILLIAM BAXTER,
Foreman of Greenhouses.

J. E. SATTERTHWAITE,
Foreman Printing-office.

Miss C. JEANETTE PERRY, B. S. (*Kansas State Agricultural College*),
Assistant in Printing.

JOHN G. HANEY, B. S. (*Kansas State Agricultural College*),
Assistant in Field and Feeding Experiments.

Miss MARY B. PRITNER, B. S. (*Kansas State Agricultural College* ,
Assistant in Domestic Science.

B. S. McFARLAND,
Principal Preparatory Department.

Miss ADA RICE, B. S. (*Kansas State Agricultural College*),
Assistant in Preparatory Department.

Other Officers.

JACOB LUND, M. S. (*Kansas State Agricultural College*),
Engineer.

Miss OLIVE LONG, B. S. (*Kansas State Agricultural College*),
Executive Clerk.

W. N. LEWIS,
Janitor.

ARCHIE HUYCKE,
Secretary to President.

Experiment Station.

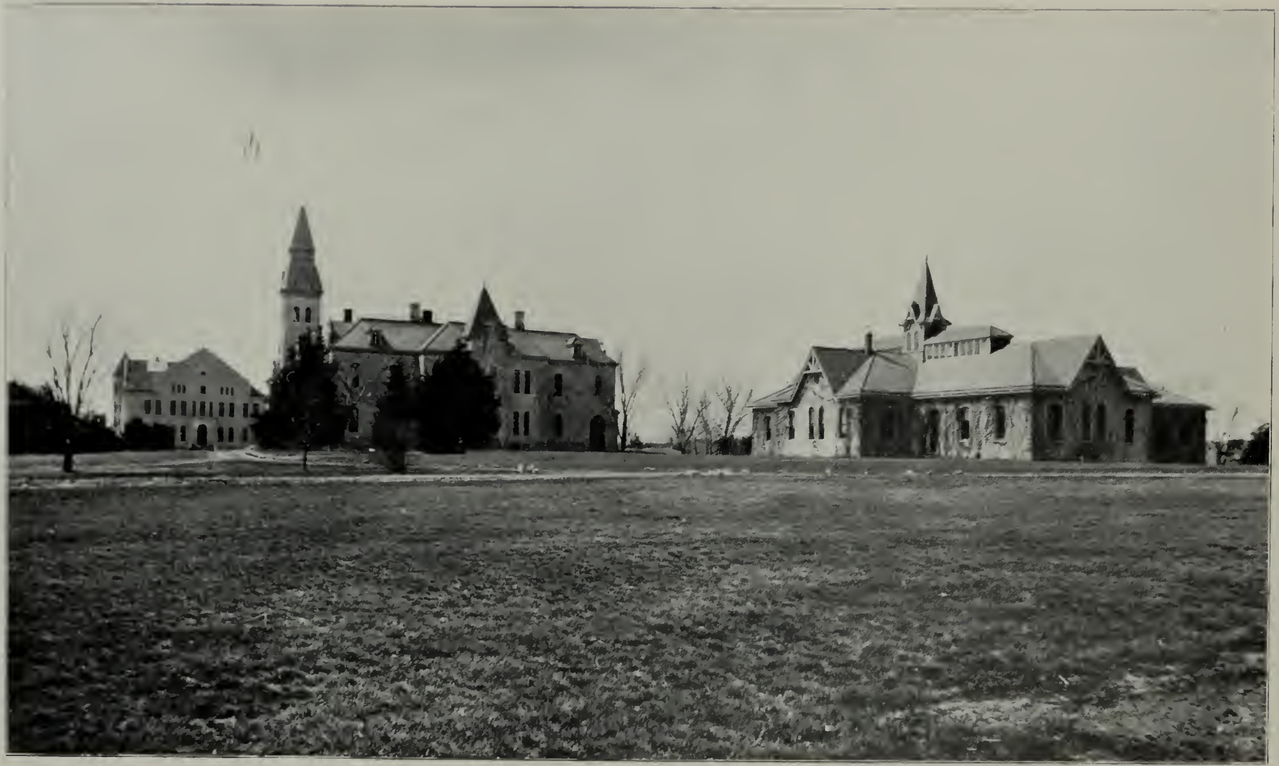
Council.

PROFESSOR WILLARD, Chemist, *Chairman.*
PROFESSOR HITCHCOCK, Botanist.
PROFESSOR FISCHER, Veterinarian.
PROFESSOR COTTRELL, Agriculturist.
PROFESSOR POPENOE, Entomologist and Horticulturist.

Assistants.

DANIEL H. OTIS, M. S., Assistant in Dairying.
PERCIVAL J. PARROTT, M. A., Assistant Entomologist.
ROBERT W. CLOTHIER, M. S., Assistant Chemist.
JOHN M. WESTGATE, B. S., Assistant Botanist.
ROBERT B. MITCHELL, B. S., Assistant in Veterinary Department.
ALBERT DICKENS, B. S., Assistant Horticulturist.
JOHN G. HANEY, B. S., Assistant in Field and Feeding Experiments.

DOMESTIC SCIENCE HALL. MAIN BUILDING. LIBRARY HALL.



LIBRARY HALL. MAIN BUILDING. CHEMICAL LABORATORY.

History and Resources.

AN act of congress, approved July 2, 1862, gave to each state public lands to the amount of 30,000 acres for each of the senators and representatives in congress according to the census of 1860, for the "endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Under this act, the state of Kansas received 82,313.53 acres of land, and, in 1863, established the State Agricultural College, by endowing with these lands Bluemont College, which had been erected two miles from Manhattan, under the auspices of the Methodist Episcopal Church, but was presented to the state for the purpose named in the act of congress.

In 1873 the College was reorganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 223 acres, one mile from the city of Manhattan. On this fine location the state has provided buildings costing $257,000; of these a description is given elsewhere. The farm and grounds, furniture, stock and other illustrative apparatus cost $183,000. The entire College estate comprises 323 acres, 100 lying one mile west of the College in two tracts of twenty and eighty acres, respectively. The present value of buildings, grounds, apparatus, etc., is almost equal to the sum of all appropriations by the state. Nearly all the lands have been sold, giving a fund of $503,035.60, which is by law invested in bonds, the interest alone being used for the current expenses of the College.

The annual income from the endowment fund—about $28,000—is supplemented by an appropriation under an act of congress approved August 30, 1890, of $15,000 for 1890, and a sum increasing each year by $1000 until the annual amount shall be $25,000. This fund, now $25,000, is "to be applied only to instruction in agriculture, the mechanic arts and the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction." "No portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings."

Nearly the expense of instruction is thus provided for, and the state is left to erect and maintain the necessary buildings and meet expenses in management of the funds.

Under an act of congress approved March 7, 1887, the College receives, by annual appropriations in congress, $15,000 a year for the maintenance of an experiment station, "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The property of the Station, including a building erected especially for its use, amounts to more than $16,000.

Grounds and Buildings.

The College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing towards the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted, according to the design of a professional landscape-gardener, while well-graveled drives and good walks lead to the various buildings. All of these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and all are heated by steam or hot water. A complete system of sewerage has been provided. Following is a brief description of the principal

College Buildings.

College (main), 152 x 250 feet in extreme dimensions, arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices of President and Secretary, cloak-rooms, studies, chapel, printing-office, and seventeen classrooms.

Chemical Laboratory, one story, 26 x 90 and 46 x 75 feet of floor space, in form of a cross. It contains seven rooms, occupied by the department of chemistry and mineralogy.

Mechanics Hall, 39 x 103 feet, two stories, and 40 x 80 feet, one story, occupied by wood and iron shops, finishing shop, and classroom. Extensive additions will be made to the shops this fall, at a cost of $10,000. A central steam plant furnishes heat and power to the buildings.

Horticultural Hall, 32 x 80 feet, one story and cellar, having museum, classroom, and storage, with greenhouse attached.

Horticultural Laboratory, with five propagating houses and insectary attached.

Armory and Entomological Laboratory, 46 x 96 feet, two stories. This building, which has served many purposes, is now fitted for an armory and drill room below, and for entomological classroom, laboratory, and museum, and veterinary museum, above.

Library and Agricultural Science Hall, 100 x 140 feet, three and four stories. This building provides permanent quarters for the library, with ample reading-rooms; classrooms, laboratories, and cabinet room for zoology, veterinary science, and botany; a classroom for use in history and economics; and suitable rooms for various College societies.

Domestic Science Hall, 84 x 70 feet, containing two stories and basement. The first story and the basement are occupied by the department of household economics, lunches to the students and members of the faculty being served in the basement. The second floor is occupied in part by the department of music and in part by that of sewing.

The Horticultural Barn, a stone building, containing storeroom, granary, and stables for several horses.

The Farm Barn, a double but connected stone structure, 50 x 75 feet and 48 x 96 feet, with an addition of sheds and experimental pens 40 x 50 feet. A basement, having stalls for seventy-five head of cattle, silos, motor room, and granaries, underlies the entire structure.

A Dairy Building, to cost $25,000, will be ready January 1, 1900, which will contain all modern improvements for butter-making and cheese-making, also, lecture-rooms, and offices of the farm department.

The Library.

The College library is one of the most important supplements to classroom instruction. It consists of 19,704 bound volumes and about 14,600 pamphlets. These books are mainly kept in a general library, but many volumes of technical character are withdrawn, and held in departmental libraries. All of the books are indexed in card catalogues which show their author, title, and to a large degree the details of their contents; also their location. Students are allowed free access to the shelves, a privilege and a source of culture that is given in perhaps no other library of its size in the country. Students may draw books for home use under simple and liberal regulations. The library is open daily, except on legal holidays, from seven A. M. to six P. M., and the librarian or an assistant is in constant attendance during this period to assist those who use the books. By all these means the library is utilized to the fullest extent and is of inestimable value.

The College subscribes for the leading literary, scientific and agricultural journals; while the principal daily and weekly papers of Kansas, and many from other states, are received in exchange for the

College publications. All these are kept on file for the use of students and Faculty.

The College has been designated as a depository of United States public documents for the fifth congressional district of Kansas, and 2260 volumes have already been received on this account.

An approximate estimate of the number of books, including public reports and bound periodicals, by classes, is as follows:

Classes.	*Vols.*
Agriculture	2960
Horticulture	600
Mechanics and engineering	552
Mathematics and astronomy	270
Physics and meteorology	359
Chemistry and mineralogy	330
Geology	370
Botany	1100
Zoology and entomology	570
Biology	106
Medical and veterinary science	396
Military science	136
Domestic science	130
Economic science	672
History and political science	1465
Printing	84
Industrial art and design	235
English language and literature	1200
Logic and philosophy	206
General science	850
Geography and travels	265
Dictionaries and cyclopedias	206
Education	445
Law	190
Administrative reports	364
Public documents on deposit	2260
Fiction	500
Poetry	200
Religion and morals	725
Fine arts	261
Bound magazines	1371
Music	69
History of industry	200
Oratory	60
Experiment station bulletins and reports,	1686
Miscellaneous books	59

Objects.

This College now accomplishes the objects of its endowment in several ways:

First, It gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

Second, It teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, physics, botany, entomology, zoölogy and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science; and all are enforced by actual experiment.

Third, It trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household departments is made a part of the general education for usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

Fourth, It strives to increase our experimental knowledge of agriculture and horticulture. The provision for extensive and accurate researches, made by establishing the Experiment Station as a distinct department of the College offers assurance of more definite results than can be obtained by ordinary methods. The professors of agriculture, horticulture, chemistry, entomology, botany, and veterinary science, together with the President of the College, form the Experiment Station Council, by authority of which experiments are undertaken and carried on in the several departments, under the special supervision of the professors. These touch "the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses for forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable." The bulletins of the Station, issued at least as often as once in three months, and now amounting to not less than 125,000 copies during the year, are sent, according to law, free of postage, to all newspapers in the state, and "to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit." Press bulletins in editions of 2200 or more are issued weekly, through which many timely results are brought promptly to the people. Correspondence with reference to bulletins and experiments is welcomed, and may be addressed to the several members of the Council.

Fifth, It seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose, farmers' institutes have been organized in about sixty counties of the state in which from two to four members of the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers and their families. These institutes, held for the past twenty years, have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented. Members of the Faculty are also prominently connected with the state associations for the promotion of agriculture, horticulture, the natural sciences, and education in general. Correspondence as to farmers' institutes or any questions of practical interest in agriculture or related sciences is desired.

The *Industrialist,* published by the College and edited by the Faculty, gives a wide circulation to matters of interest in the College.

Courses of Study.

With a view to providing for the wants of the various classes of students, the following courses of study are offered:

1. Four-years' courses in: (*a*) Agriculture, (*b*) domestic science, (*c*) general science, (*d*) mechanical engineering, (*e*) electrical engineering.
2. Short courses in: (*a*) Dairying, (*b*) domestic science, (*c*) agriculture and mechanics, (*d*) horticulture and mechanics.
3. Apprentice courses in the shops, and in the printing-office.
4. Special courses for those whose previous training and peculiar needs warrant and require them.

Full explanations of the several courses, and of the studies included in them, will be found under the proper headings, and a general view of four of the four years' courses and of the short courses is given on the following pages.

COURSES OF STUDY.

		ALL COURSES.	
FIRST YEAR.	FALL TERM.	Algebra	5
		English Readings	5
		Elementary Botany	5
		Hygiene	1
		Free-hand Drawing	2½
		Shop or *Sewing*	5
		Military Drill or *Calisthenics*	4
		Singing and *Notation.**	
	WINTER TERM.	Algebra	5
		English Readings	5
		Agriculture or Household Economics	5
		Geometrical Drawing	2½
		Shop or *Sewing*	5
		Military Drill 2	3
		Tactics 1	
		or *Calisthenics*	5
		Singing and *Notation.**	
	SPRING TERM.	Geometry	5
		English Themes	5
		Object Drawing	2½
		Elementary Physics	5
		Shop or *Sewing*	5
		Military Drill or *Calisthenics*	5
		Singing and *Notation.**	

Four-Year Courses.

This and the three following pages give a general view of the four years' courses of study. The first year is the same for all students, excepting that the young men take military drill, agriculture, and shop work, while the young women take calisthenics, household economics, and sewing.

Figures following studies show class hours per week. Subjects in *italic type* require no study outside of class. Military drill is optional for young men of the third and fourth years. In the fourth year certain terms are open for electives in the science course and domestic science course. The electives are chosen under the direction of the Faculty. The following list is announced, and others will be provided as demanded in so far as the teaching force available will permit:

FALL TERM.	WINTER TERM.	SPRING TERM.
Analytical Geometry.	Calculus.	Calculus.
Domestic Science.	Domestic Science.	Domestic Science.
Chemistry.	Chemistry.	Chemistry.
Comparative Anatomy.	Veterinary Science.	Breeds and Breeding.
German.	German.	German.
Botany.	Entomology.	Botany.
	Horticulture.	Entomology.
		Forestry and Landscape-gardening.
		Physics.

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* Music by special permission at any time during the course.

COURSES OF STUDY—*Continued.*

		AGRICULTURE.		DOMESTIC SCIENCE.		SCIENCE.		MECH. ENGINEERING.	
SECOND YEAR.	FALL TERM.	Chemistry	5	Chemistry	5	Chemistry	5	Chemistry	5
		Laboratory	2½	*Laboratory*	2½	*Laboratory*	2½	*Laboratory*	2½
		Geometry	5	Geometry	5	Geometry	5	Geometry	5
		Horticulture	5	Horticulture	5	Horticulture	5	Projection Drawing	5
		Industrial, Horticulture,	5	*Industrial*	5	*Industrial*	5	*Oratory*	5
		Oratory	5	*Calisthenics*	5	*Military Drill* or		*Shop*	5
		Military Drill	5	*Music.**		*Calisthenics*	5	*Military Drill*	5
		*Music.**				*Music.**		*Music.**	
	WINTER TERM.	Organic Chemistry	3	Organic Chemistry	3	Organic Chemistry	3	Mechanics	5
		Chemistry of Metals	2	Chemistry of Metals	2	Chemistry of Metals	2	Chemistry of Metals	2
		Laboratory	2½	*Laboratory*	2½	*Laboratory*	2½	*Laboratory*	2½
		Trigonometry	5	Trigonometry or		Trigonometry	5	Trigonometry	5
		Dairying	5	American Literature	5	Physiology	5	*Projection Drawing*	5
		Laboratory	10	Oratory	2 or 3	Oratory	2 or 3	*Shop* and *Lectures*	10
		Military Science	3	Dressmaking	5	*Industrial*	5	Military Science	3
				Laboratory	5	Military Science	3		
				Calisthenics	5	or *Calisthenics*	5		
	SPRING TERM.	Analytical Chemistry	2½	Analytical Chemistry	2½	Analytical Chemistry	2½	Analytical Chemistry	2½
		Laboratory	7½	*Laboratory*	7½	*Laboratory*	7½	*Laboratory*	7½
		Entomology	5	Entomology	5	Entomology	5	Physics	3
		Tillage and Fertility	5	Oratory or Music	2 or 3	Oratory	2 or 3	Hydraulics	2
		Physiology	5	Physiology	5	Higher Algebra	5	Higher Algebra	5
		Surveying	2	*Calisthenics*	5	*Surveying*	2	*Axonometric Drawing*	5
		Military Drill	5			*Military Drill* or		*Shop*	5
						Calisthenics	5	*Military Drill*	5

COURSES OF STUDY—*Continued.*

		AGRICULTURE.		DOMESTIC SCIENCE.		SCIENCE.		MECH. ENGINEERING.	
THIRD YEAR.	FALL TERM.	Rhetoric	5	Rhetoric	5	Rhetoric	5	Rhetoric	5
		General History	5	General History	5	General History	5	General History	5
		Agricultural Chemistry and Soil Physics	5	Chemistry of Cookery	5	Oratory	2	Analytical Geometry	5
		Hygiene of Farm Animals	3	Domestic Science	2	Zoölogy	2½	Descriptive Geometry	5
		Oratory	5	*Laboratory*	5	*Laboratory*	7½	*Shop* and *Lectures*	7½
				Oratory or *Music*	5	*Projection Drawing*	2½		
						Industrial	5		
	WINTER TERM.	Nineteenth Cent. Hist.	5	Nineteenth Cent. Hist	5	Nineteenth Cent. Hist.	5	Nineteenth Cent. Hist.	5
		Civics	5	Civics	5	Civics	5	Civics	5
		Chemistry of Foods (½ t.) Stock Feeding (½ t.)	5	Chemistry of Foods (½ t.) Home Architecture (½ t.)	5	Projection Drawing (½ t.) Chemistry of Foods (½ t.)	5	Calculus	5
		Zoölogy	2½	Domestic Science	2	Geology	5	*Oratory*	5
		Laboratory	7½	*Laboratory*	5	*Industrial*	5	*Mechanical Drawing*	5
		Industrial Horticulture,	5	*Floriculture*	5			*Graphic Statics*	2½
								Shop	5
	SPRING TERM.	Economic Principles	5	Economic Principles	5	Economic Principles	5	Economic Principles	5
		Geology	5	Geology	5	Logic	5	Calculus	5
		Horticulture	5	Zoölogy	2½	Bacteriology	4	Principles of Mechanism	5
		Stock Feeding	5	*Laboratory*	7½	*Laboratory*	2½	Perspective and Sketching	2½
		Agricultural Mechanics,	5	Domestic Science	2	Perspective and Sketching	2½	*Machine Design*	5
				Laboratory	5	*Industrial*	5	*Shop*	7½

COURSES OF STUDY—Continued.

		AGRICULTURE.		DOMESTIC SCIENCE.		SCIENCE.		MECH. ENGINEERING.	
FOURTH YEAR.	FALL TERM.	Physics	5	Physics	5	Physics	5	Physics	5
		History of Industries	5	History of Industries	5	History of Industries	5	History of Industries	5
		Bacteriology	4	Bacteriology	4	Elective	5	Mechanics of Materials	5
		Laboratory	2½	*Laboratory*	2½	Oratory	5	*Eng. Laboratory*	5
		Comparative Anatomy	5	Oratory or Music	3	*Industrial*	5	*Foundations*	5
		Industrial, Agriculture,	5	Therapeutic Cookery	2			*Shop*	5
				Laboratory	5				
	WINTER TERM.	Physics	5	Physics	5	Physics	5	Physics	5
		Horticulture	5	English Literature	5	English Literature	5	Applied Mechanics	5
		Physiological Botany	5	Physiological Botany	5	Physiological Botany	5	Engineering Power Plants	5
		Laboratory	5	*Laboratory*	5	*Laboratory*	5	*Eng. Laboratory*	5
		Veterinary Science	5	Emergency Lectures	2½	Elective	5	*Machine Design*	5
				Special Physiology	2½			*Shop*	5
	SPRING TERM.	English Literature	5	English Literature	5	English Literature	5	English Literature	5
		Breeds and Breeding	5	Psychology	5	Psychology	5	Applied Mechanics	5
		Plant Diseases and Plant Breeding	5	Elective	5	Elective	5	Thermodynamics	5
		Agricultural Economics	5	Demonstrations	5	*Object Drawing*	5	*Machine Design*	10
		Thesis.		Thesis.		Thesis.		Thesis.	

COURSES OF STUDY—*Concluded.*

The Short Courses.

These short courses are given only in the terms indicated. Applicants over eighteen years of age and with the rudiments of a common-school education are admitted to these courses without examination, but at the beginning of the respective terms only.

Dairy School Course.

ONE WINTER TERM.

Principles of Agri. . (½t) Dairy Bookkeeping, (½t)	5
Dairying . . . . (½t) Creamery or Private Butter-making or Cheese-making (½t)	5
Feeds and Feeding. (½t) Breeds and Breeding (½t)	5
Bacteriology	3
Diseases of Dairy Animals	2
Boiler and Engine	5
For Farmers: *Milk Testing and Private Butter-making*	20
Creamerymen: *Milk Testing and Creamery Butter-making*	20
Cheese-makers: *Milk Testing and Factory Cheese-making*	20

Farmers' Short Course.

(A Short Course in Agriculture, Horticulture, and Mechanics.)

FIRST YEAR, WINTER TERM.

Feeds and Feeding	5
Horticulture, Entomology	5
Crop Production, Bookkeeping	5
Diseases of Farm Animals and Bacteriology	5
Fruit Propagation	5
Blacksmithing, Repairing	10
Science Lectures	1

SECOND YEAR, WINTER TERM.

HORTICULTURE.		AGRICULTURE.	
Vegetable Gardening and Small-fruit Culture	5	Breeds and Breeding	5
Orchard Treatment, Pomology	5	Dairying, Farm Architecture	5
Diseases and Insects	5	Botany	5
Physics and Chemistry	5	Physics and Chemistry	5
Shops, Farm Carpentry, etc	10	*Shops, Farm Carpentry, etc*	10
Horticultural Practice	5	*Farm Practice*	5
Science Lectures	1	*Science Lectures*	1

Domestic Science Short Course.

FIRST YEAR, FALL TERM.

Lectures and Practice in Cooking	15
Drawing	5
Home Sanitation and Household Accounts	1
Sewing	16
Vegetable Gardening and Floriculture	5

SECOND YEAR, FALL TERM.

Lectures and Practice in Cooking and Home Nursing	10
Physics . . . . (½t) Chemistry . . . . (½t)	5
Bacteriology and Physilogy	2½
Dressmaking	12

Subjects in *italic type* require no home work.

Industrial Training.

This institution is preëminently industrial in its aims, methods, and tendencies. While the pure sciences, mathematics and other studies are rigorously taught, there is constantly present a practical atmosphere which incites the student to an application of the principles taught, and thus lends interest and value to the work. In nearly every term of the four years' course the student gives one hour per day to industrial training of one kind or another. This awakens and deepens sympathy with industry and toil, impresses the student with the essential dignity of labor, thus educating toward the industries instead of away from them, and lays a good foundation for a life work in industrial and technical lines. Even should students not all return to the farm, the shop, or to housewifery, the wider knowledge afforded them and the broader sympathies engendered cannot but redound to their good and to the advantage of society at large and the industrial classes in particular.

Throughout the first year young men take their industrial in the shops. They thus get a familiarity with tools and methods which enables them to do the wood and iron work commonly needed on the farm, and which is useful to all everywhere. The young women take sewing during the first year, and a certain amount of cooking practice. The utility of this needs no argument. After the first year there are differences in the industrial requirements corresponding to differences in the several courses of study. In the domestic science course the various lines of household art constitute almost the entire industrial work, floriculture being given one term and another being open to choice. In the mechanical engineering course shop work in one or another of its various kinds is required every term. In the agriculture course the industrials include practical instruction in the fields, orchards, gardens, and diary, and in feeding. The science course offers more latitude in choice of industrials after the second year. Young women may take sewing, cooking, printing, floriculture, or music. Young men may have wood work, iron work, dairying, farming, gardening, fruit-growing, or printing. The availability of these industrials depends somewhat on the season in some cases, so that not all are open each term. In addition to the above, a limited number of students are allowed typewriting as the industrial, upon recommendation of the head of a department having a machine.

The labor of students during assigned industrial time is not paid for, as its object is educational, and the student receives full value in the training afforded. In all the instruction in industrial lines special attention is given to making the courses systematic and progressive. Students desiring to give extra attention to such work are allowed every opportunity that the departments can afford. Many students acquire sufficient proficiency to be able to turn their skill to a financial advantage during the later terms of their courses, and all who apply themselves with any diligence obtain a training that cannot fail to be of great benefit to them in after-life. The work of the several industrials will be found described in detail under the individual headings.

Extended Course.

Considering the entrance requirements of the institution, the four years' course of study is brief. Where practicable, students are advised to extend their course to five years. For students desiring to do this, additional work will be arranged in departments in which they may desire to specialize. Work done in the extended course may receive special mention on the diploma and be counted against requirements for the second degree.

Special Courses.

Persons of suitable age or advancement, who desire to pursue such branches of study as are most directly related to agriculture or other industries, may select such studies under the advice of the Faculty.

Postgraduate Courses.

Arrangements can be made for advanced study in the several departments at any time, and outlines of courses will be furnished on application. The electives of the extended course are open to graduates, and special opportunities will be given for investigation and research. Every facility for advancement in the several arts taught at the College will be afforded such students, though they are not required to pursue industrial training while in these courses.

Degrees.

The degree of bachelor of science is conferred upon students who complete the full course of four years and sustain all the examinations. This degree entitles the holder to credit for studies pursued in any application for state teachers' certificate. (See Laws of 1893.)

Students who extend the course one full year will receive mention on the diploma of special proficiency in those lines of study which they have pursued as an elective for not less than three terms.

The degree of master of science is conferred in course upon graduates who comply with the following conditions:

1. Upon candidates resident at least one year, the degree may be conferred at the end of a two-years postgraduate course; upon non-

resident candidates, the degree may be conferred at the end of a three-years postgraduate course; upon candidates who have taken a five-years Extended Course or its equivalent, it may be conferred at the end of a one-year postgraduate course. These courses must be outlined by, or be acceptable to, the Faculty.

2. Each candidate shall furnish evidence satisfactory to the Faculty of proficiency in one of the following arts: Agriculture, horticulture, engineering, architecture, designing, household economics; and in a science or group of sciences related thereto. Either a science or an art may constitute the student's major study; in either case his studies are expected to bear upon the distinctive work of the institution.

3. Each candidate must present for consideration by the Faculty a satisfactory thesis, involving original research in the line of his major study, and shall deposit a perfect copy in the College library.

4. Application to the Faculty for sanction of the lines of study and research should be made as early as the 1st day of November.

5. The subject of the thesis must be settled upon as soon as the 1st day of January preceding the commencement at which the degree is expected.

In a resident postgraduate course of study, as provided for by rule 1, the work required shall be the equivalent of that necessary to pursue three full studies, the time in the aggregate to be divided approximately into three equivalents, two to the major and one to the minor study.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of master of science may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the master's degree must be a graduate of at least three years' standing, and a resident of Kansas.

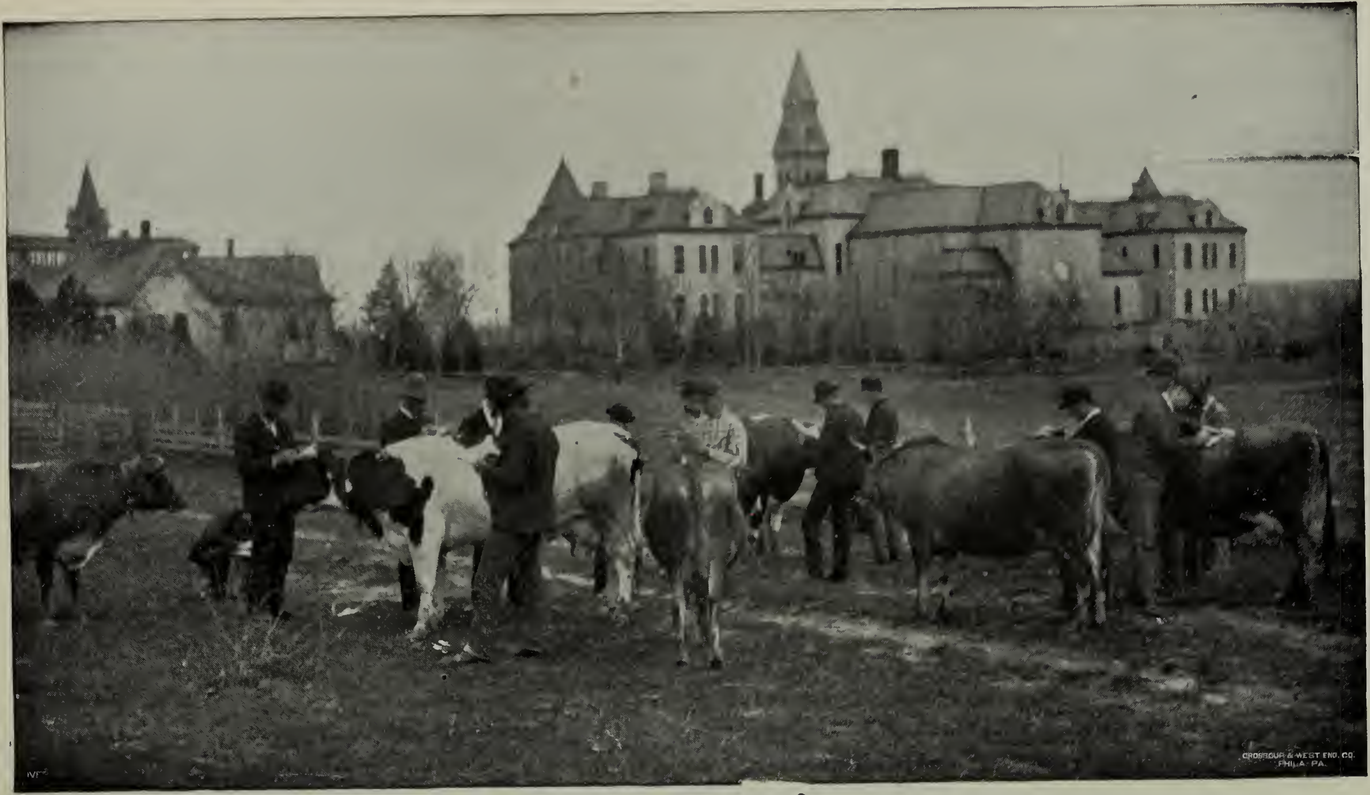
2. His postgraduate study shall have been in line with that required of graduates of this College, as published in our catalogue.

3. He must make application for the degree on or before the 1st day of January preceding the granting of the same. The application must be accompained with a statement of his course of study, the

work upon which the claim for the degree is based, and the subject selected for his thesis.

4. By April 1, an abstract of the thesis must be submitted to the Faculty.

5. Before May 15, the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.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STUDENTS JUDGING THE DAIRY CATTLE.

BARN AND SHEDS.

Outline of Instruction.

THE AGRICULTURE COURSE.—FOUR YEARS.

The leading feature of the four-years agricultural course is the training offered in methods of farm production which will give greatest cash returns. With money-making as an object, instruction is given in tillage, crop production, stock feeding and breeding, dairying, farm management, orcharding, small-fruit culture, and gardening. Insect life is considered in its relations to the farm, orchard, and garden, including a study of beneficial and injurious insects, with practical methods of combating the latter; and the laws of disease and health are studied, with the causes of the diseases of farm animals and methods of avoiding and combating them. Work is required on the farm and in the orchards and gardens which will familiarize the student with the best method of conducting operations in these lines; and taken with this work is a study of the results secured by the College in crop production, fruit-raising, gardening, and feeding for beef, milk, and pork. Three terms of work are given in the carpenter and blacksmith shops, that the student may learn to handle tools and be able to make the common repairs needed on the farm.

Closely connected with the money-making branches of agriculture are the sciences upon whose laws successful farm practices are based. Bacteriology is taught, that the student may understand the conditions necessary for promoting the growth of bacteria which add to the fertility of the soil and those which improve the quality of dairy products; and the conditions necessary to prevent the growth of bacteria which exhaust the soil, cause losses in manures, injure dairy products, and bring disease. The laws of plant growth are taught in botany, that the farmer may through their aid grow larger and better crops. An understanding of the laws of physics enables the farmer to store moisture and to reduce loss of water from the soil by evaporation, so that he can produce crops in dry years. A knowledge of chemistry applied to farm work secures richer soil, better yields, cheaper and greater gains in feeding, and better quality of farm products. The fertility of our new lands has been produced by forces which have been at work for countless ages. A knowledge of the workings of these forces, as taught in geology, helps the farmer to save the fertility of his fields until used for crops and to render available the immense food stores locked up in the soil.

A farmer should be an influential citizen as well as a skilful producer. For this reason, in the agricultural course instruction is given in literature and language, political and economic science, oratory, mathematics, drawing, and music. Such training enables the farmer to take part and become an influential factor in social and public work. Young men securing an education such as is afforded in this course do not leave the farm, but become enthusiastic and successful workers, competent either to manage farms of their own or to superintend for others.

We have frequent calls for farm superintendents, farm foremen, herdsmen, creamery managers, managers of fruit farms, superintendents of orchards and nurseries, foremen of greenhouses, and landscape-gardeners. These positions offer good positions to competent young men at the beginning of the engagements, with opportunities for increased pay as fast as earning ability increases. The young man who does not have the capital to run a farm of his own, if he is made of the right stuff, can complete our four-years course, secure a position at living wages, and work up to a salary of from $1,000 to $3,000 per year in farm work. The call for men for such positions is greater than the supply.

Agriculture.

1. *Shop.* First year. The shop work for the students of this course is arranged with special reference to the needs of the farmer. Elementary woodwork is given in joinery and simple problems of construction. Facility in the use of tools having been obtained, students advance to general woodwork and carpentry. As far as possible, practical work is given, that the agricultural students may learn how to do the building required on the farm.

Blacksmithing begins with simple forging and welding, and leads into the forging and construction of singletree clips, wagon ironware, clevices, horseshoes, etc. Advanced work in blacksmithing is given, and includes the sharpening and tempering of tools, plowshares, harrow teeth, etc. An especial effort is made to have the course in blacksmithing as thorough and complete as possible, and to give the agricultural students more than ordinary skill in the forging of iron and steel.

Foundry work is given to those desiring it, but agricultural students are not urged to take work in this department. Special instruction is given in boiler- and engine-room, in the firing of boilers, care and running of engines, pumps, etc. In all the shop work for the agricultural students, the aim is to teach not only the proper *methods* of making the repairs so frequently needed on the farm but also to give the student that manual skill and dexterity which will enable him to actually *make* these repairs.

2. *First Principles of Agriculture.* First year, winter term. Treats of soils, their contents, texture, moisture, tillage, and enrichment; the farm plant, its office, propagation, growth, and care; the animal, its life, feed, and management. Five hours per week. Text-book, Bailey's Principles of Agriculture. Lectures.

3. *Dairying.* Second year, winter term. Milk—its secretion, nature, and composition; cause and conditions influencing the quality and quantity of milk; handling of milk for the market and for butter-making; creaming of milk by gravity methods and by the separator; cream ripening; making and marketing butter. Five hours per week. Text-book: Wing's Milk and its Products. Lectures.

4. *Industrial.* Second year, winter term. Class work will be supplemented by work in the dairy room, where students will be given practice in running the hand separator, ripening and churning cream, washing, salting, working, printing and packing butter, and care of dairy utensils and machines; analyzing by the Babcock method, milk, cream, skim-milk, and buttermilk.

5. *Tillage and Fertility.* Second year, spring term. The management of the soil for maintaining and increasing its productivity, with special study of conservation of moisture. Includes a study of the nature, functions, texture and washing of soils, with the amount and availability of plant-food in soils; practical methods of rendering more plant-food available; plows and plowing, and other implements and methods of tillage; the conservation of soil moisture; farm manures; nitrification; clover crops, fallows, and improvement of soils by clover and alfalfa; rotations; selection of seed; methods of planting; treatment after planting and harvesting of grain, grass, root and forage crops; and special treatment. Five hours per week. Text-books: Robert's Fertility of the Land, and King's The Soil. Lectures.

6. *Stock Feeding.* Third year, winter term, half study; spring term, full study. The properties of feed stuffs, and their combination to secure good results at least cost with products having the desired qualities; effect of foods on quality of products; preparation of feeds; methods of feeding; care and shelter of farm animals; construction of farm buildings and appliances to secure best returns from feed and for saving labor; study of experimental work in stock feeding. Five hours per week. Text-book: Henry's Feeds and Feeding. Lectures.

7. *Agricultural Mechanics.* Third year, spring term. Advanced instruction in the machine-shop is given the agricultural students, and is supplemented by lectures on the care and use of agricultural machinery. The exact character of the work given is somewhat optional with the students. Those preferring can take more advanced

boiler and engine practice, while others work in the machine-shop, bolt-making, grinding, sharpening, screw-cutting, and the repairing of agricultural machinery, under the direction of skilled instructors. Special attention will be given to farm hydraulics, irrigation, drainage, earthen dams, and reservoirs.

8. *Industrial.* Fourth year, fall term. The industrial is in feed and feeding work; the students doing the work in these lines according to the best methods adapted to Kansas conditions.

9. *Breeds and Breeding.* Third year, spring term. History and characteristics of the breeds of live stock, and their adaptability to Kansas conditions; laws of heredity, atavism; law of correlation; variation; conditions affecting fecundity; in-and-in breeding and cross-breeding; form as an index to qualities; selection and judging of live stock; compiling pedigrees. Five hours per week. Text-book: Miles's Stock Breeding. Lectures.

10. *Agricultural Economics.* Fourth year, spring term. Selection, equipment and management of the farm; farm labor, buildings, and machinery; field and feeding experiments; study of the markets for farm products; agricultural history. Five hours per week. Lectures. Library references.

MEANS OF ILLUSTRATION.

Two hundred and eighty acres of land for farm purposes, with fields in alfalfa, grasses, grains, and forage crops, illustrating the best methods of field work.

A barn, fifty by seventy-five feet, arranged for experimental purposes, connected with a general-purpose barn, forty-eight by ninety-six feet. The barns are filled with improved machinery for shelling, grinding, thrashing, cleaning and grading grain, and for cutting for the silo. Three thousand dollars was appropriated by the last legislature for the purchase of a herd and for providing shelter for it. With this appropriation a model dairy barn for 100 cows will be built during the summer of 1899 and cows purchased to fill it.

We plan during the winter of 1899–1900 to fatten for the market 800 head of hogs, with the object of determining the best method of fattening hogs with our drought-resisting crops. Students in the agricultural classes will be required to make a close study of this work throughout its progress. Such an opportunity on so large a scale has not been offered before at any college in the world.

Farm implements for all kinds of Kansas farm work.

The last legislature has appropriated $25,000 for a dairy building and $6,000 for dairy equipment. This building will be completed and equipped ready for use during the school year of 1899–1900, and will contain rooms and equipment for thorough work in creamery butter-making, factory cheese-making, and private dairying. It will also contain large classrooms for general agricultural work, an agricultural library, and an agricultural museum.

EXPERIMENT STATION.

The United States government appropriates $15,000 each year to this College for agricultural experiments. The work now in progress includes experiments in fattening hogs, feeding and handling dairy cows and calves, and the production of dairy products; field experiments in seed breeding and conservation of moisture; investigations in orchard work and the raising of small fruits and garden products. A special study is now being made of the most profitable methods of storing and marketing fruit and vegetables.

Remedies for blackleg and swine-plague or hog-cholera are being constantly tested. The chemist is investigating sugar-beets, soil moisture, and methods of increasing the protein in crops. The botanist is giving special attention to Kansas weeds and grasses, and to seed breeding.

Each student has full opportunities to study this experimental work and many students help conduct the experiments. This study and work is a most valuable addition to the regular class work.

Botany.

1. *Elementary Botany.* First year, fall term, all courses. The classroom work is supplemented by daily field work, which in the main runs parallel with the text-book used. The aim in the field work is to teach the student how to observe, and how to draw conclusions from his observations. The following are a few of the subjects studied: Germination of corn, bean or other common seed; opening of buds; falling of leaves; various fruits and their adaptations for dissemination; pollination and adaptations for cross-fertilization. These notes and observations, together with the necessary drawings, are submitted from time to time for examination and criticism. In addition to this, each student prepares a herbarium of not less than fifty species of native plants. These are named by the aid of Gray's Manual of Botany, sixth edition, or by a key to the genera of Manhattan plants, prepared by the professor of botany. The students are required to provide themselves with pocket lenses, under the direction of the professor in charge. Text-book, Bergen's Elements of Botany.

2. *Physiological Botany.* Fourth year, winter term, all courses except the engineering. During this term the minute structure of plants is studied in the laboratory by the aid of the compound microscope. The anatomy of the plant is studied chiefly for the purpose of showing how the organs perform their various functions. At the

same time the student is drilled in correct observation, accurate statements of results, and the illustration by drawings. Each student has the use of a compound microscope, with the necessary tools and reagents. The text-book used is Barnes's Plant Life. Each student is required to prepare a herbarium of not less than twenty-five species of twigs. These are named by the aid of a pamphlet prepared by the professor of botany. A good herbarium and a large greenhouse are drawn upon for material for study.

3. *Plant Diseases and Plant Breeding.* Fourth year, spring term, agriculture course. The first half of the term will include a study of the common injurious fungi that affect cultivated plants. Each student is required to prepare a herbarium of parasitic fungi of not less than twenty-five specimens. For the purpose of identifying his collection the student may use the laboratory and library of the department at such times as are best suited to his convenience. The second half of the term will be devoted to the subject of plant breeding. The laws of heredity and variation will be studied, and their application to methods of plant improvement by crossing and selection will be presented. The library of the botanical department of the Experiment Station is rich in works upon the subject, and will be at the disposal of this class. The extended series of experiments now being carried on by the Experiment Station will be used to illustrate this important branch. Text-book, Barnes's Plant Life.

EXTENDED COURSE.

4. *Morphology and Ecology.* Fall term, three days per week. The former includes a study of the organs of plants, their modifications to perform various functions, and a comparison of these organs in plants of various degrees of development. The latter is that part of vegetable physiology which treats of plants as organisms, and would include such topics as germination. pollination, insectivorous plants, symbiosis, and adaptation to climate. The second half of the term will be devoted to the subject of ecological plant geography, which will include a study of plant communities as a result of adaptation to environment.

5. *Systematic Botany.* Spring term, three days per week. A study is made of the natural orders of phenogamous plants, their characters and relationships.

6. *Vegetable Physiology.* Fall term, two days per week. This deals with the chemical and physical problems presented in living plants, such as the absorption of food, elaboration of organic material, transfer of food, action of light. This course should be preceded by the required physics and fourth-year botany. In the spring term a

course of experimental physiology will be offered, consisting of laboratory experiments illustrating the preceding course.

7. *Cryptogamic Botany.* Winter term. During this term the principal types of fungi, algæ, mosses and ferns are studied. This course should be preceded by the required botany of the fourth year.

8. *Economic Botany.* Spring term, two days per week. A study of the economic products of the vegetable kingdom, their origin, history, and uses. This should be preceded by systematic botany.

9. *Plant Breeding.* Winter term. A series of lectures embracing the laws of evolution, their application to the production of new types of useful plants, and the technique of cross-fertilization and selection.

MEANS OF ILLUSTRATION.

A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the state; a twig herbarium, illustrating woody plants in their winter condition; and a seed herbarium, containing a representative collection of seeds and fruits — all together, the herbarium contains about 60,000 specimens; also twenty-eight compound microscopes, four dissecting microscopes, tools, reagents, etc. The department is provided with a zinc culture room, and the ordinary apparatus for bacteriological work; a dark room and apparatus for photography; microtomes and other apparatus for microtomic work; about 150 charts, illustrating all departments of botany; a botanical library of over 1,000 bound volumes and numerous pamphlets.

Chemistry.

1. *Chemistry.* Second year, fall term. A general introduction is given this term, consisting of about fifty lectures and experimental demonstrations, supplemented by both oral and written recitations. After a few weeks the periodic system of the elements is made the basis of chemical classification. Special attention is given to the non-metals and the general foundations of chemical science.

2. *Chemistry of the Metals.* Second year, winter term, twice a week. This course not only serves to elucidate chemical principles, but it is the basis of instruction in metallurgical processes and industrial applications of the metals.

3. *Elementary Laboratory Work.* Second year, fall and winter terms. A course of laboratory work one afternoon per week (two consecutive hours) is required of all students pursuing the study of elementary inorganic chemistry.

4. *Organic Chemistry.* Second year, winter term, three times a week. In this course special emphasis is given to the fatty compounds and the study of general reactions, as a separate elective course on aromatic compounds follows. Prerequisite: Course 1.

5. *Analytical Chemistry.* Second year, spring term. This course is designed not only to impart the principles and practices of qualitative chemical analysis, but to give opportunity for extending the student's knowledge of inorganic chemistry. It regularly follows course 2, but may be taken at the same time with that course, and requires two and one-half hours per week.

6. *Laboratory Work in Analytical Chemistry.* This course must be taken with course 5, and occupies seven and one-half hours per week. The exercises are so arranged as to pass from the simple to the more difficult, and at the same time to facilitate comparative study of the various basic and acid radicals. Opportunity is afforded for advanced work to such students as desire it.

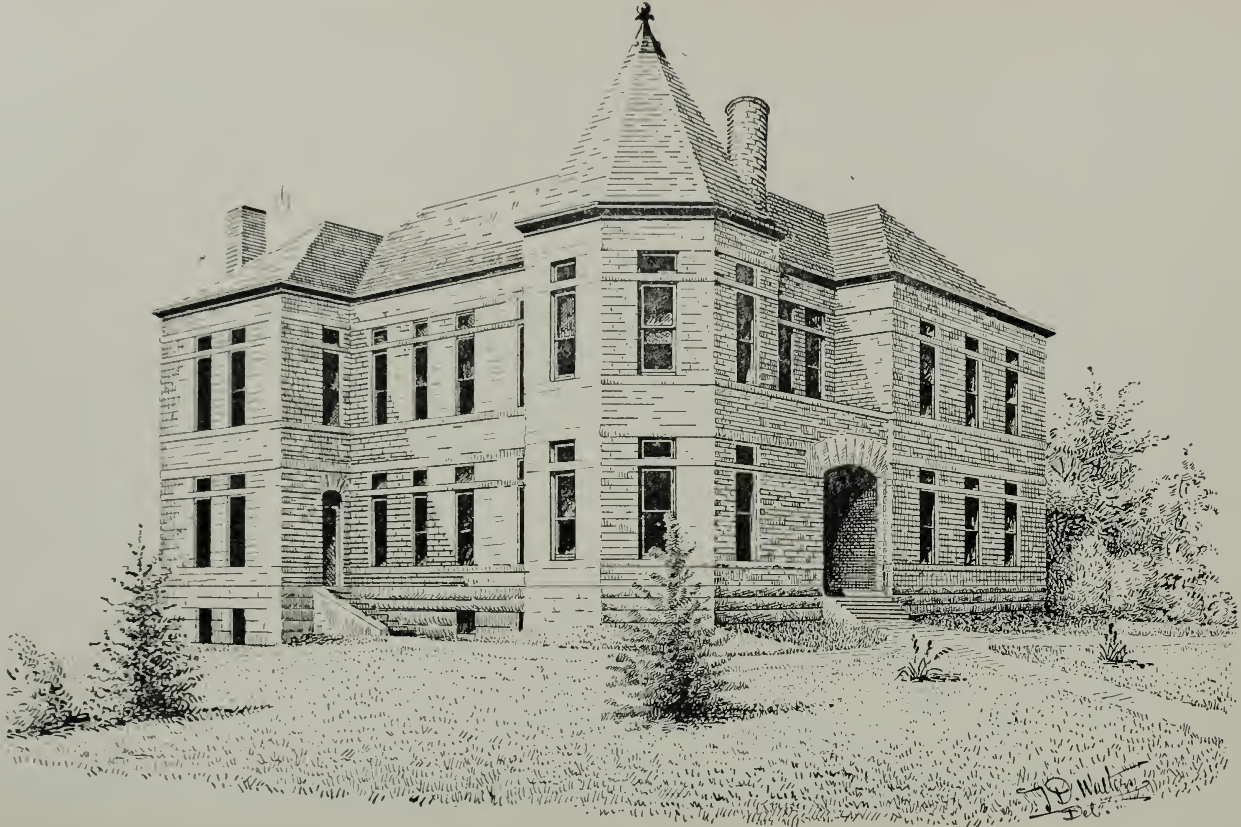
7. *Agricultural Chemistry and Soil Physics.* Third year, fall term. A series of lectures is given on the formation and characteristics of different types of soil; the soil requirements of a variety of crops; the modes of soil enrichment and amelioration, and the general relation of crops to earth, air, and water. Both chemical and physical relations are considered throughout this course, but especial attention is given to the study of soil moisture from the physical point of view. The lectures are illustrated by experiments. Courses 4 and 5 must precede this course.

8. *Chemistry of Foods.* Third year, winter term. This course is given by lectures during each half of the term, and embodies a presentation of the chemical composition of foods, the changes which they undergo in cooking and digestion, and their adaptation to the various needs of the animal body. Course 4 must be finished before undertaking this work.

9. *Advanced Chemistry of Foods.* This course may be taken by advanced or postgraduate students. It consists in study of the literature treating of food and nutrition from a chemical standpoint, and is accompanied by laboratory work. The latter feature may be enlarged to almost any extent that the student may desire. The higher lines of work in this course require some previous training in quantitative analysis.

10. *Quantitative Analysis.* May be taken up at any time after the completion of courses 5 and 6. After the necessary preliminary training, the student may give special attention to any line of quantitative analysis, such as that of foods and fodders, soils and fertilizers,

CHEMICAL LABORATORY.



DOMESTIC SCIENCE HALL.

ores, water, gases, etc. The investigation of special chemical questions is encouraged.

11. *Advanced Inorganic Chemistry.* In the spring term, lectures and laboratory work in this subject are offered as an elective to fourth-year students and postgraduates. The course will include assigned reading of a text-book in inorganic chemistry. Prerequisites: Courses 1, 2, and 3.

12. *Aromatic Compounds.* This course (offered in the fall term) is supplementary to course 4, and is an elective for fourth-years and postgraduates. Prerequisite: Course 4.

13. *Advanced Laboratory Work in Pure Chemistry.* Advanced laboratory courses, supplementary to the advanced classroom work, will be offered in any term to properly qualified students. Students undertaking this line of work must spend at least twenty or thirty hours of work under the direction of the professor in charge in order to receive credit.

14. *Historical and Theoretical Chemistry.* This course (offered in any term when three or more students apply for it) will be adapted to the convenience of instructor and students concerned. Prerequisites: Courses 10 and 12.

MEANS OF ILLUSTRATION.

Laboratory tables, with all the necessary equipment for eighty students in qualitative analysis and eight in quantitative analysis; facilities for assaying; illustrative apparatus, both general and special; a well-selected mineralogical collection, representing all but the rarest species, in various forms, colors, and structures; a good collection of rocks; a set of Stassfurt minerals, and the fertilizers prepared from them.

Geology and Mineralogy.

1. *Geology.* This course is given regularly to third-year students either in the winter or spring term (according to course of study) More attention is given to the physical and chemical aspects of geological study than to the biological and historical sides of the subject. The aim is to teach the students something of the relations of geology to other sciences and of its importance and scope, rather than to enter into its details and technicalities. Especial emphasis is given to the relation between this science and physical geography.

2. *Crystallography.* An elective course in crystallography is offered by the professor of pure chemistry whenever a sufficient number of students from the higher college classes apply for it.

3. *Blowpipe Analysis and Determinative Mineralogy.* An elective course offered by the professor of applied chemistry. Prerequisite: Chemistry 5.

Domestic Science.

The purpose of the course of domestic science is to afford training in the special subjects which must be considered in the daily administration of every home. The applications of modern science to everyday life are manifold, and nowhere more important than in the home, the center of all normal life. The sciences which underlie the successful and intelligent conduct of the home, whether it be small or large, on its material side, are, above all others, physiology, chemistry, and hygiene, and therefore any well arranged course of domestic science must be based upon a substantial foundation of these subjects. Moreover, as this cannot be well understood or well applied without the elements of physics, biology, etc., these branches also must receive special attention in the course of study together with other subjects, as provided in the college curriculum.

1. *Hygiene.* First year, fall term. The course of lectures in elementary hygiene is given to both young men and young women. The instruction of the young women is to be under the direction of the professor of domestic science. The general principles of wholesome living and the general care of the human body will be the leading subjects considered.

In the following courses the work is arranged on educational as well as technical lines, and offers both theoretical and practical instruction, and is given in a well equipped domestic science laboratory.

The student is required to keep a set of note-books, namely: A permanent note-book, a daily class record of class and personal work, and a recipe book. This plan enables the student to keep a clear, systematic and concise record of every detail and objective point in the work. The lectures and practical work in cooking are presented in four courses, and two special professional courses on the following lines:

2. *Household Economics.* First year, winter term. Lectures, with weekly laboratory practice. The objective points, neatness, order, economy, and accuracy, will be observed. The subject of cookery, its origin, purpose, etc., table of measurements and weights, directions in measuring, definitions pertaining to manipulations, methods of cookery, etc., the general care of utensils, the kitchen and its adjoining apartments, the general sanitation of the home, general household management and home ethics constitute the leading subjects of practice and lecture work.

3. *Chemistry of Cookery.* Third year, fall term. Text-books, Mathieu Williams's Chemistry of Cookery, and Ellen H. Richards's Chemistry of Cooking and Cleaning.

4. *Domestic Science.* Lectures, recitations and laboratory instruction are combined throughout the year.

Third year, fall term. A course in fruit cookery; plain household cookery; lectures upon the food principles; classification, elementary composition of the human body; study of fuels, heat and its effect; cooking temperatures, etc.

Third year, winter term. Plain household cookery continued; advanced household cookery the latter half of the term.

Third year, spring term. Advanced household cookery the first half of the term; high-class cookery the second half of the term; standard menus, and general lectures in the science of nutrition, with parallel readings are required. Instruction in general serving and entertaining is given.

5. *Therapeutic Cookery.* Fourth year, fall term. Special cookery for the sick and its application to the home, and for hospital nurses in training.

6. *Emergency Lectures and Special Physiology.* Fourth year, winter term. First aids to the injured; lectures on home nursing.

7. *Demonstrations.* Fourth year, spring term. Lecture work in scientific and practical cookery. Each student is required to give a demonstration lecture in cooking before the class, and give approved recipes, observing all the educational, scientific, technical and practical points involved in each method demonstrated. The student lecturer may select one assistant from the class, to assist in the general details of the work. In connection with this lecture work, each student is required to give a complete lesson outline and conduct one class in practical work according to the best approved methods in laboratory practice. The two professional courses are designed to meet the demand for more thoroughly and broadly trained young women who go out as graduates. The work of the fourth year is planned so as to give the professional training that a complete course of domestic science should involve.

Domestic Art.

All young women take sewing the first year, and in the domestic science course dressmaking is required in the winter term of the second year.

1. *Sewing — Industrial Work.* The course of work has been carefully graded, with the idea of developing habits of accuracy and self-reliance. Each pupil is required to keep a note-book, in which she records a description of the work accomplished. A written examination is held at the end of each term. During the first term the pupil makes a book of models, covering the full course in hand sewing, and consisting of basting, hemming, gathering, darning, patching, etc.

Second term. Machine practice; drafting, cutting and making underskirt and drawers.

Third term. Drafting, fitting and making dress without lining.

Fourth term. Cutting and making corset cover and night-dress.

2. *Dressmaking.* Five hours a week will be devoted to classroom work. Pupils will be taught to adapt and use patterns taken from pattern sheets; also the use of a dress-cutting system. Five hours a week will be devoted to industrial work. Each pupil will be required to furnish the material and draft, cut and make a woolen dress for herself.

Drawing, Descriptive Geometry, and Architecture.

1. *Free-hand Drawing.* First year, fall term. The course in free-hand drawing comprises work in surface designing and ten lessons in sketching from the object. The surface designing is taught in the first year. The student begins with forms involving the straight line and the arc. He is led to note the effect of geometrical arrangement, repetition, alternation, symmetry, proportion, harmony, and contrast. Later, the conventional ornament is taken up, and more subtle curvatures and complex forms are introduced. Toward the close of the term, natural forms and historic ornament in the flat are studied.

2. *Geometrical Drawing.* All first-year students are given one term's work in geometrical drawing. This work comprises the construction of perpendiculars, parallels, angles, and polygons; the circle and its secant lines; the ovoid, the oval, and the spiral; various geometrical designs and elementary architectural forms; the use of drawing-board and T square, and the conventional representation of building materials.

3. *Object Drawing.* First year, spring term. Drawing from the object is taken up. Simple geometrical models and objects are placed before the class, their apparent forms are discussed, and outline sketches are made from different stand points.

4. *Orthogrāphic Projection.* The engineering students of the second year are given three full terms of orthographic projection, comprising the projection, section, development, interpenetration, shade and shadow of the Euclidian solid. Instructicn is also given in the manipulation of the blue- and black-printing processes, and in drafting from the model—a complete eight-horse-power engine. Accuracy of measurement and neatness of execution are required in all work. The third-year students of the general course are given two half terms of projection drawing. The character of this work is the same as that of the corresponding term of the engineering course.

5. *Axonometric Projection.* In the third year of the engineering course axonometric projection is taken up. The study comprises a complete exposition of the various systems of representing forms of three dimensions. The practical advantages of each are pointed out by illustrative problems, especially with regard to isometric projection, a system of graphic representation which is gradually forcing its way into the workshop. Various exercises in line and brush shading are connected with this work.

6. *Descriptive Geometry.* This study forms the graphic work of the winter term of the third year in the engineering course. It comprises the usual problems on the straight line, circle, rotation, collineation, and surfaces of revolution. Several weeks are given to the study of warped surfaces, their sections, intersections, and relations.

7. *Perspective and Sketching.* This study is taught on mathematical bases, and is intended to furnish the scientific answers for the questions which constantly confront the student of drawing from the object. It comprises the subjects of vanishing points, vanishing traces, measuring points, cylindric perspective and perspective corrections, shades and shadows in perspective.

The work in sketching is connected with the study of linear perspective in the spring of the third year. The models used are geometrical solids and objects of utility and beauty, whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow and reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish.

8. *Advanced Object Drawing.* Fourth year, spring term. Exercises in pen drawing, brush shading, use of water-colors, architectural and machine drawing, at the option of the student.

9. *Architectural Course.* The courses of study for all engineering branches must necessarily be the same with regard to all work of a preparatory or general character, but differ with regard to the professional branches. Students who intend to take architecture in place of mechanical engineering may make substitutions for work, as stated on page 40. The department of industrial art is well equipped to teach the branches named. It owns a rapidly growing collection of illustrative building material, complete sets of drawings and blue prints of most of the Kansas state buildings, a photographic camera, a dark room equipped with running water and ruby light, etc. The substantial buildings of the institution and its complete system of heating and lighting furnish additional illustrative material. Stu-

dents who intend to take this course should study landscape-gardening with the department of horticulture.

10. *Home Architecture.* Third year, fall term. The students in domestic science will be given a course of lectures on practical home building, and will be required to design and draw a set of plans, elevations and details of a small residence, with modern provisions for heating, ventilation, and drainage.

NOTE.—The College furnishes drawing-board, T square, triangles and water-colors for the graphic work done at the College, but all tools for home use, including drawing-board, T square, triangles, compasses, and protractor, must be furnished by the student.

MEANS OF ILLUSTRATION.

Models, plaster casts, patterns, charts, collection of ornamental tiles, marbles, and terra-cotta forms. One of the classrooms is provided with top light and furnished with twenty-five Dietzgen drawing-tables.

English Language and Literature.

DEPARTMENT AIMS.

1. To create and increase a taste for reading.
2. To develop a careful and discriminating judgment regarding literature and printed matter.
3. To teach by examples the meaning and uses of the various forms of literature.
4. To increase the student's stock of words by an extended experience in word analysis, dictionary use, and language history.
5. To give him actual practice in the exercise of many forms of composition, and thereby to develop facility in expressing himself.
6. To beget the historic sense while tracing the literature of the Anglo-Saxon race in its cause-and-effect relations to the great events and movements of history.
7. To lead the student to a plain in which he may see language and literature as the most complete and most permanent index to the civilization of any people in any age.

English Readings. First year, fall term. The careful study of a number of standard authors of first-class interest and easy style. As far as possible these are read and discussed in the class, after which the students write either abstracts or analyses of the pieces. They thus have the continual opportunity of rendering and hearing the best thought in the best form, and afterwards of developing their own thought and skill in an abridged reproduction. With these various objective readings the student learns to distinguish various forms and styles of literature and to note the qualities of thought and expression.

FALL-TERM CLASS READINGS.

Benjamin Franklin, Autobiography. (American Book Co., 35c.)
Nathaniel Hawthorne, Snow Image, etc. (Univ. Press Co., 20c.)
Daniel Defoe, Robinson Crusoe. (Univ. Press Co., 20c.)
Walter Scott, Lady of the Lake. (Univ. Press Co., Am. Book Co., 30c.)
Washington Irving, Sketch Book. (Univ. Press Co. 20c., Am. Book Co.)
Nathaniel Hawthorne, The Sketch Book. (Univ. Press Co., 20c.)
Bulwer-Lytton, Harold: The Last of the Saxon Kings. (Univ. Press Co., 30c.)

English Readings. First year, winter term. This is a continuation, with new authors, of the work begun in the fall term. It has the same general objects in view. Instead, however, of the written abstracts and analyses, students will devote considerable attention to the etymology of words found in the texts, taking as a guide Swinton's Word Analysis.

WINTER-TERM CLASS READINGS.

Nathaniel Hawthorne, Wonderbook. (Univ. Press Co., ——.)
Henry W. Longfellow, Evangeline. (Univ. Press Co., 20c.)
Alfred Tennyson, Princess. (Am. Book Co., 20c., Ginn & Co.)
John Ruskin, Sesame and Lilies. (—— ——.)
Ralph Waldo Emerson, American Scholar, etc. (—— ——.)
Washington Irving, Knickerbocker Stories. (Univ. Press Co., 20c.)

Theme Writing. Second year, fall term. This term is an extension and an application of the work begun in composition. With Newcomer's English Composition as a guide, the student is given a further experience in outlining and developing themes. He makes his own choice of subjects within the limits of each type of composition. Narration, description, exposition, argumentation, persuasion, reviews, letters, etc., are studied as processes, and each student writes one or more pieces of each type upon subjects of his own choice. These themes are read by their writers before the class and the members pass systematic criticism upon the words, sentences, general treatment, thought and delivery. Afterwards the themes are passed in and receive corrections (in red) from the instructor in charge.

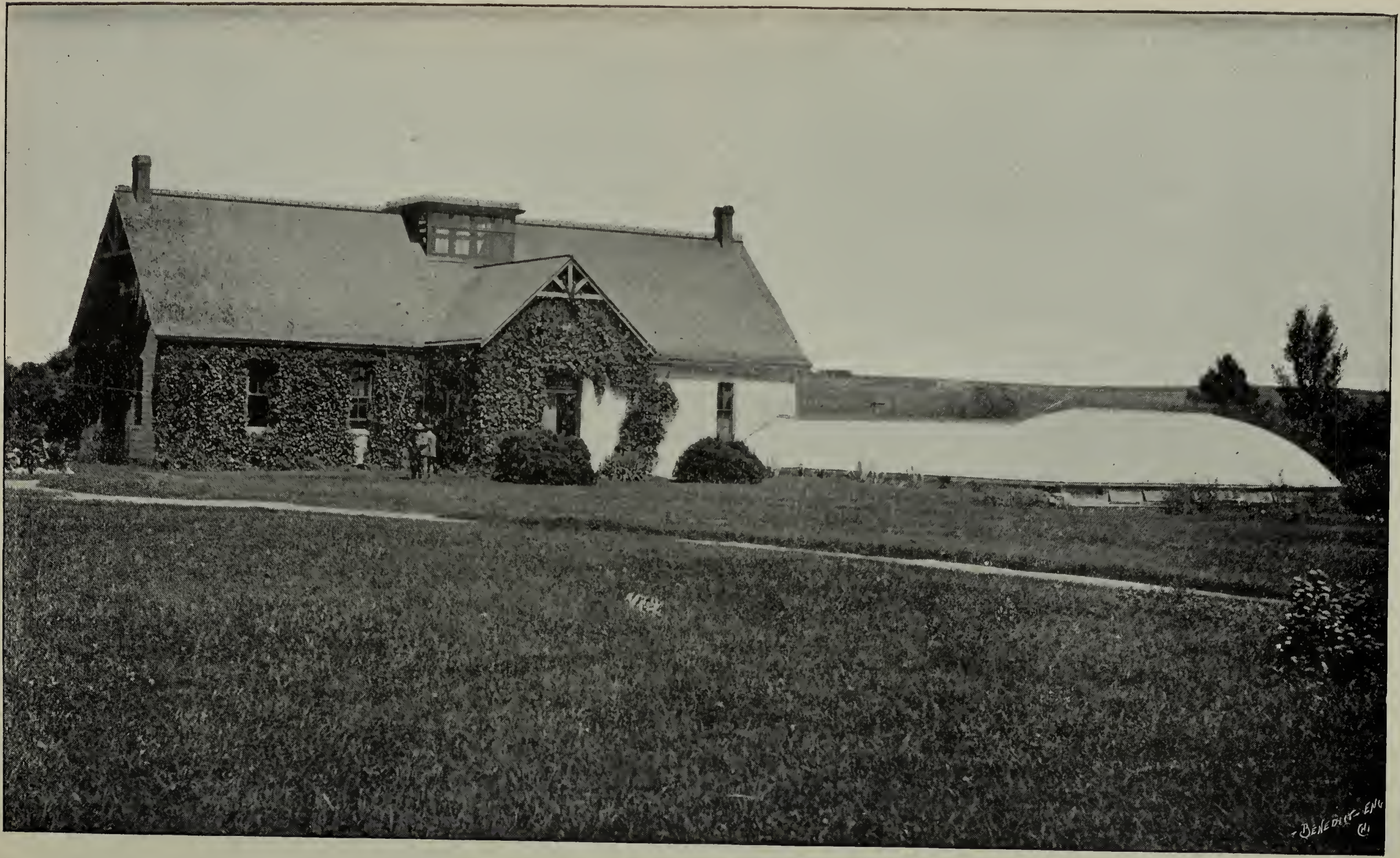
American Literature. Second year, winter term. The work here is a historic survey of American authorship from colonial times to the present. It will be conducted by lectures and readings, alternating daily. The readings will have for their end an acquaintance with the writers of the first rank. In the lectures the chronological order will be followed, and the spirit of understanding the growth will be fostered.

Rhetoric. Third year, fall term. This includes the philosophy and analysis of the principles involved in the various kinds of literary art. It covers a comparison of the ancient and modern ideas of the subject, the meaning of rhetoric as a science and as an art; the nature and differences between the many kinds of style; the elements which go to make up these; the characteristics and uses of the two great divisions—prose and poetry; the grand problem of the material and thought, or of the content of discourse of whatever sort—how to get it, how to handle it; how to limit a subject, how to expand a theme, and how to stop. The work will be partly by lectures, partly by text-book study, partly by examining examples in the standard authors, and partly by written work from the students.

English Literature. Fourth year, winter and spring terms. The course begins with a classification of races which shows the origin and relations of the Anglo-Saxon people. Then follows an outline history of the English language. The literature of England is treated by lectures (three each week during the two terms). These begin with the earliest times and extend to the third quarter of the nineteenth century. The method pursued is to carry forward parallel accounts of the works on British soil, a passing mention of foreign works, and of the chief historical events directly or indirectly affecting the course of thought. These are given in double-page columns with dates in the margin. Literature is thus inseparably linked in the mind with the course of other human events. The reciprocal relations of cause and effect are clearly kept in mind. Language and literature are shown to be the art above all arts, and the clearest and most permanent exponent of each age or people.

In addition to this, two days in each week the class reads together and in chronological order selections from the great representative writers. As a basis, the prose collection by Garnett and the poetry collection by Syle are used. Besides these, many other works are brought in, read, and discussed. Each week during both terms all students make an extended written analysis of some important literary production. Original readings and individual opinions are encouraged as much as possible.

Especial stress is all the way laid on finding the elements of beauty and moral power in every piece read. Altogether, it is hoped that this extended excursion along the most considerable stream of the world's literature may prove an inspiration toward noble and earnest life, may show the power of language and the imperishable character of its more beautiful forms, may reveal something of the mode and meaning of social advance and civilization, and be to the student in after-life a well-spring of pleasure and profit.



HORTICULTURAL HALL AND GREENHOUSE.

STUDENTS AT WORK IN THE GARDENS.

History and Political Science.

1. *General History.* Third year, fall term. The objects of the course are to fix in the mind the main facts of history; study their meanings, relations, laws, and lessons; train the memory, reason, imagination, and sympathies; help the student to understand references in current literature; comprehend the origin and development of existing states, peoples, and institutions; and by the light of the past learn something of the future—what it may be and what it should be—the when, the why, the ought, and the how. The work consists of lectures, text-book study, reference reading, analyses, discussions, solution of problems, and original research and generalization.

2. *Nineteenth Century History.* Third year, winter term. In this course the chief nations of the world, the leading events and great movements of this richest of all the centuries are studied more fully than is possible in the preceding course. The methods employed are similar to those just named under general history; but still more attention is given to the philosophy of history and its ethical aspects, the drift of our time, and the possibilities of the future; and a wider use of the library is substituted for text-book study—reference reading in such books as Buckle's History of Civilization in England, Carlyle's French Revolution, Sloan's Napoleon, the works of Green, Guizot, McMaster, Mackenzie, etc., being required. An effort is also made to create a strong interest in the lives of Lincoln, Gladstone, Bismarck, Garibaldi, and other great men; in the works of Darwin, Spencer, Laplace, and other scientists and philosophers; and in the writings of Lowell, Emerson, Hugo, Ruskin, Tennyson, Mazzini, Goethe, Tolstoi, Sienkiewicz, etc.—an interest that may lead the students to do much valuable reading in history, biography, science, philosophy, and general literature; one of the main ideas of the work being that if a youth be given an appetite for knowledge and trained a little in methods of acquiring it he will make the world his university and every library his text-book.

3. *Civics.* Third year, winter term. The science of citizenship; law and government, municipal, state, and national; their origin and development; what they are now and what they ought to be. Lectures, with text-book work, analyses, and discussions. The students choose selectmen, governor, supreme court, etc., hold town meetings, organize as a state house of representatives, and afterwards as a national house of representatives; bills for better roads, proportional representation, income tax, electric ballot, initiative and other live issues are introduced, discussed, and acted on, as in Topeka and Wash-

ington; the constitutionality of enactments is tried before the supreme court; parliamentary usage is followed as far as practicable.

4. *Principles of Economics.* Third year, spring term. Introduction to the general subject, with elaboration of certain aspects. Pains are taken to compare conflicting views and point out sources of information on all sides of vexed questions. Lectures and library reading. Each student keeps a note-book and reading record.

5. *History of Industries.* Fourth year, fall term. The development of science and industry is traced in a course of lectures. Textbook, Wright's Industrial Evolution of the United States.

Horticulture and Entomology.

1. *Horticulture.* Second year, fall term. The lectures of this term present the principles of the art, introducing the facts underlying methods of propagation, nursery, orchard and garden treatment; the handling, storing and preservation of fruits; with a brief discussion of the origin and characteristics of garden varieties.

Third year. Spring term, the work of this term is devoted to an examination of the operations of general gardening, with special attention to seasonable practice, including the application of fungicides and insecticides, and a more detailed study of varieties with reference to local conditions.

Fourth year, winter term. The principles of construction and management of various glass horticultural structures, specific methods of propagation, the forcing of flowering and vegetable plants, and other work of the season are among the topics of the lectures of this term. Electives are offered in the fourth year to classes in ornamental gardening, pomology, and the principles of forestry.

2. *Floriculture.* Third year, winter term. This subject, open to young women in the domestic science course, includes general greenhouse management, window gardening, the growing of flowering plants in the open air, the destruction of plant pests, etc., practice alternating with lectures on these topics.

3. *Entomology.* Second year, spring term. In the elementary work of this term, the intention is to give the student a basis for the intelligent appreciation of the important relations of the science to agriculture and horticulture. A brief view of structural types precedes an outline of insect classification, and a special study of the economic bearings of the subjects completes the work. Illustrative material is furnished from the individual collections of the students and from the College museum. Charts, dissections and drawings from nature are used to illustrate points of value in classification. The pocket lens

used in botany is required in this study. Text-book, Comstock's Manual for the Study of Insects, abridged.

Fourth year. *Elective.* Review of the general subject, with the text-book, Comstock's Manual, extended. Entomological methods, including field work in observation and collection, laboratory work in preparation, dissection and preservation, and in the study of life-histories by the aid of the vivarium. The independent and critical study of systematic entomology, the work in which may be restricted, when desired, to groups of special agricultural importance. Economic entomology, so far as relates to the injurious insects of field and garden, with a special study of method of repression.

INDUSTRIAL WORK.

In this work students are given practical instruction in the planting and arrangement of nursery stock, digging and planting of trees, pruning and training of trees and vines, transplanting and management of small fruits, use of hotbeds and cold-frames, and general vegetable gardening. Special students during the winter term receive more advanced instruction in the various methods of propagation, in grafting room and green-houses. Students who show special proficiency in horticulture are often employed as foremen. An industrial course in floriculture is open to young women.

MEANS OF ILLUSTRATION.

Orchards containing 100 varieties of apples, 50 of peaches, 10 of pears, 30 of plums, 40 of cherries, and 15 of apricots.

Small-fruit garden, with 200 varieties of small fruits, including blackberries, raspberries, gooseberries, currants, and strawberries; and vineyard, with 175 varieties of grapes.

Forest plantation of 12 acres, containing 20 varieties, of from 1 to 25 years' growth.

Ornamental grounds set with a variety of evergreens and deciduous trees. Sample rows, containing about 150 varieties of ornamental and useful shrubs and trees, labeled.

Vegetable garden with hotbeds and cold-frames, and experimental beds. Practice rows for students' budding, grafting, cultivating, and pruning.

A well-planted and furnished greenhouse of three rooms, stocked with a fine collection of native and exotic plants; three propagating pits, 12x70 feet, for experimental work, and three others of the same size with commodious workroom adjoining, and equipped with the best improvements for the use of the young women in the practice of floriculture.

A tool room containing 50 individual cases of horticultural tools, besides tools and implements for general use, and pumps and apparatus for spraying with fungicides and insecticides.

Museum, containing a collection of woods from American forests, seeds of many varieties of vegetables, a herbarium of cultivated grapes, and models of leading orchard fruits and vegetables.

Logic and Psychology.

1. *Logic.* Third year, spring term. The art of reasoning correctly is aided by a study of systematic logic, both deductive and inductive. Special prominence is given to methods for exact observation and experiment and correct principles of classification. The previous researches and experience of the students are made to illustrate these principles.

2. *Psychology.* Fourth year, spring term. A short course in psychology gives the general principles of intellectual and moral philosophy. Sensation, apperception, perception, memory, imagination, thought, feeling and volition are topics of explanation and analysis. Theories of right and wrong and correct principles of action are made the means of a clear understanding of individual responsibility, with special attention to personal rights and duties. Topics are assigned for research, to be presented in thesis form at the close of the term.

Mathematics.

It is the aim of the department of mathematics to give a thorough training in a small number of subjects, and to develop in the student the ability to attack new problems, rather than to burden his mind with a large number of facts or special methods. It is also characteristic of the methods of the department that an attempt is made to give to the mathematical subjects a touch of human interest by directing the attention of the student to the historical development of these subjects. For example, the course in plane geometry is opened by a lecture on the history of geometry. The following statement contains a brief description of the courses planned for next year. They differ from those given during the past year, in that the additional term obtained by raising the entrance requirements is given to algebra, and in that one term of algebra is taken from the elementary algebra and placed after trigonometry at the end of the second year.

All the following courses are required in the engineering course. Courses 1 to 6 inclusive are required, and 7, 8 and 9 are elective in the science course. Courses 1 to 4 inclusive are required, and 5 may be taken in the domestic science course. Courses 1 to 5, inclusive, are required in the agricultural course.

Elementary Algebra. Text-book, Wells's Higher Algebra.

Requirements for admission to first-year classes include the fundamental operations, factoring, highest common factor, least common multiple, fractions, and simple equations with one unknown quantity, both integral and fractional. Special attention should be paid to the acquirement of a thorough understanding of the principles of factoring, and of skill in the application of these principles, equivalent to first 131 pages of the above text.

1. First year, fall term. Simple equations with more than one unknown quantity, involution, evolution, fractional and negative exponents, radicals, and quadratic equations with one unknown quantity.

2. First year, winter term. Quadratic equations completed, ratio and proportion. Review of work covered so far.

Geometry. Text-book, Phillips and Fisher's Elements of Geometry, abridged edition.

3. First year, spring term. First, second and third books, with numerical exercises and theorems for original demonstration.

4. Review of previous work; fourth, fifth, sixth and seventh books treated as before, with original exercises. A short time is devoted to books eight and nine, only a few important propositions being demonstrated.

5. *Trigonometry.* Second year, winter term. Solution of plane triangles, essentials of trigonometry, applications to surveying and navigation.

6. *Higher Algebra.* Second year, spring term. Factoring, theory of quadratics, ratio and proportion, variation, series, undetermined coefficients, indeterminate equations, logarithms, elementary theory of coördinates.

7. *Analytic Geometry.* Third year, fall term. Text-book, Tanner and Allen's Analytic Geometry. Rectangular and polar coördinates, the straight line and circle, other conic sections, the general equation of the second degree.

Calculus. Osborn's Calculus, with lectures.

8. Third year, winter term. Differentiation, with the usual applications to maxima and minima, mechanics, series, etc.

9. Third year, spring term. Integration, with applications.

In addition to these, courses in theory of equations, differential equations, elliptic functions or other branches of the higher mathematics may be given to postgraduate students, or to undergraduates who are able to carry extra work.

Mechanical Department.

EQUIPMENT.

The shops of the Kansas State Agricultural College are furnished with the best modern machinery and tools for working both wood and iron, and are in operation six days per week throughout the year.

Wood Shop. The wood-working room is 40x103 feet, contains 220 separate kits of tools, and benches for fifty students in each class; lathes, planer, circular saw, friezer, mortising machine, grinders, and tool room containing all kinds of wood-working tools for general use, together with complete outfit of wheelwright's tools.

Machine shop. This room is 40x80 feet, contains twelve fourteen-inch engine-lathes, one sixteen-inch combination engine and turret lathe, speed lathe, Gray planer, Hendy-Norton shaper, Browne & Sharpe No. 2 universal milling-machine, Walker universal grinder, special drill grinder, key seater, bolt cutter, pipe machine, vertical drills, fifty-one-inch vertical turning and boring mill, benches and tools for fifty students, and a completely stocked tool room, equipped with the finest modern tools.

Blacksmith Shop. This room is 40x50 feet, equipped with twenty-four forges fitted with power exhaust. Each forge has anvil and complete set of smithing tools. In addition to the general tools for a fully equipped blacksmith shop, there are also installed here power punch and shears, cold saws, and a number of pieces of special apparatus built by the department.

Iron Foundry. This room is 40x50 feet, equipped with two-ton cupola, core oven, an exceptionally large number of flasks, ladles, traveling hoist, etc. The foundry makes all castings for machine building, together with boiler fronts, grate-bars, and special repair work.

Brass Foundry. This room is 16x30 feet, with crucible furnace, flasks, and complete equipment for bench and floor molding. The product consists of bearings, friction metal, valves, fittings, etc.

Pipe-Fitting Room. This room is 18x50 feet, contains a motor-driven Jarecki pipe machine, and is completely equipped with tools used by steam-fitters. Practice in pipe-fitting and steam-fitting is given.

Engineering Laboratory. This room is 35x40 feet, contains a great variety of apparatus, among which may be specified a 100,000-pound testing machine, both automatic and autographic; Flather transmission dynamometer, for determining the power required by various machines; complete cement-testing outfit; absorption brakes; steam indicators; gauge-testing apparatus, and a variety of special machines for the testing of material; also, thermometers, calorimeters, speed indicators, etc. The very complete boiler- and engine-room adjoining the laboratory, together with a ten-ton refrigerating plant, afford special opportunities for the work relating to steam engineering and refrigeration.

Power Plant. The boiler-room contains five sixty-horse-power horizontal return-flue boilers, one 100-horse-power boiler, pumps, steam-traps, etc. These boilers are used for the generation of steam both for power and heating purposes, and are independently connected, that they may be tested individually and in groups. The engine-room is equipped with one 100-horse-power medium-speed engine, direct connected to sixty-K. W. multipolar generator, with marble switchboard and complete apparatus; one fifty-horse-power Ball & Wood engine, belted to bipolar generator, with switchboard; one ten-horse-power Atlas engine; one five-horse-power generator, built in the shops, for testing purposes; one Shipman coal-oil engine, and several small dynamos for testing purposes. In connection with the power plant is a very complete rope drive installation, especially designed for the department.

Classroom. On the second floor of the wood-working department are found the classrooms, drawing-rooms, photographic room, paint room, varnish room, and pattern-storage room.

Courses of Study. The mechanical department offers the following lines of instruction:

I. Mechanical engineeering course.
II. Apprentice course.
III. Manual training.
IV. Short course in farm mechanics and repair work.

I.—MECHANICAL ENGINEERING COURSE.*

This course offers four years' training in mechanical-engineering subjects, and its object is to fit young men for responsible positions in that profession. It prepares for the successful management of machinery and manufacturing establishments, the designing, building and erection of machinery, superintendence of construction, etc. Though the work is largely technical, general studies of a broadening character are not excluded. The course includes instruction by text-book, lecture, laboratory, and workshop practice, and is especially based on mathematics, pure and applied mechanics, physics, chemistry, machine design, structural design, and steam engineering.

The course of study has been laid out with the aim of securing a judicious mixture of theory and practice, such as will not only give the student the technical skill required for engineering operations, but also a broad grasp of the fundamental principles of his profession. The advantages of combining a practical application of principles with theoretical instruction at the time these principles are being impressed by classroom work is well known. The shop work, being purely educational in its character, is so arranged that each student can make as rapid advancement as possible. Instruction is given by skilled workmen, and the work carried on is of the most practical character, being in fact the building of lathes, engines, drills and machinery for the market and the department. In all shop practice the students work from blue-prints, thus learning to read drawings readily and supplementing the work of the drawing department.

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* For skeleton outline of course, see pages 57–59.

Based upon the fundamental principle that laboratory and shop work, combined with technical training, constitute one of the most important features of engineering education, the following course is offered:

Shop Work. First year, fall term. A graded set of problems in joining, working dimensions together, with proper use and care of bench tools and simple problems in construction, through which each student is advanced according to his ability.

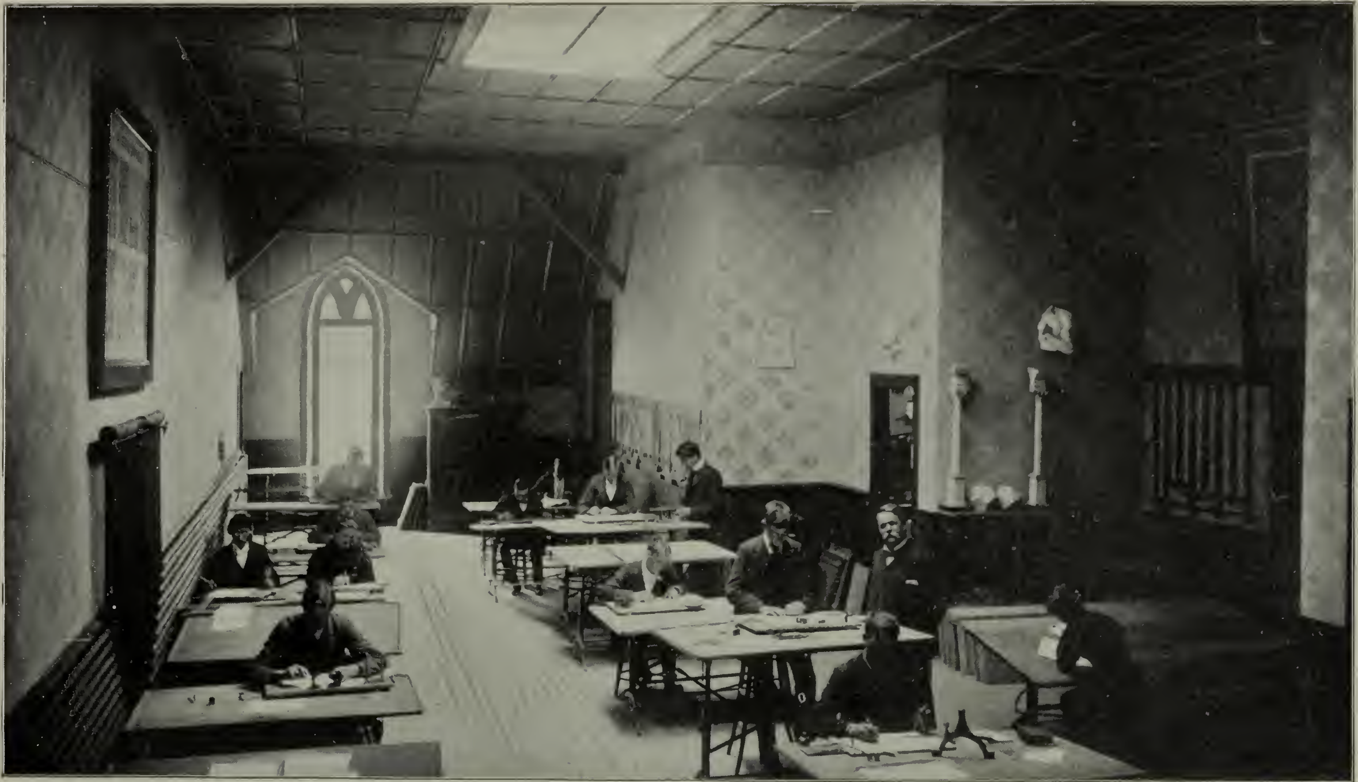
Shop Practice. First year, winter term. Advanced practice in general woodwork, carpentry, cabinet-making, turning, and pattern-making. Special attention is given to the making of patterns for machinery and apparatus to be constructed in the shops.

Shop Work. First year, spring term. Practical foundry work will include instruction in both bench and floor molding, core making, cupola practice, and the making of iron and brass castings for machine building.

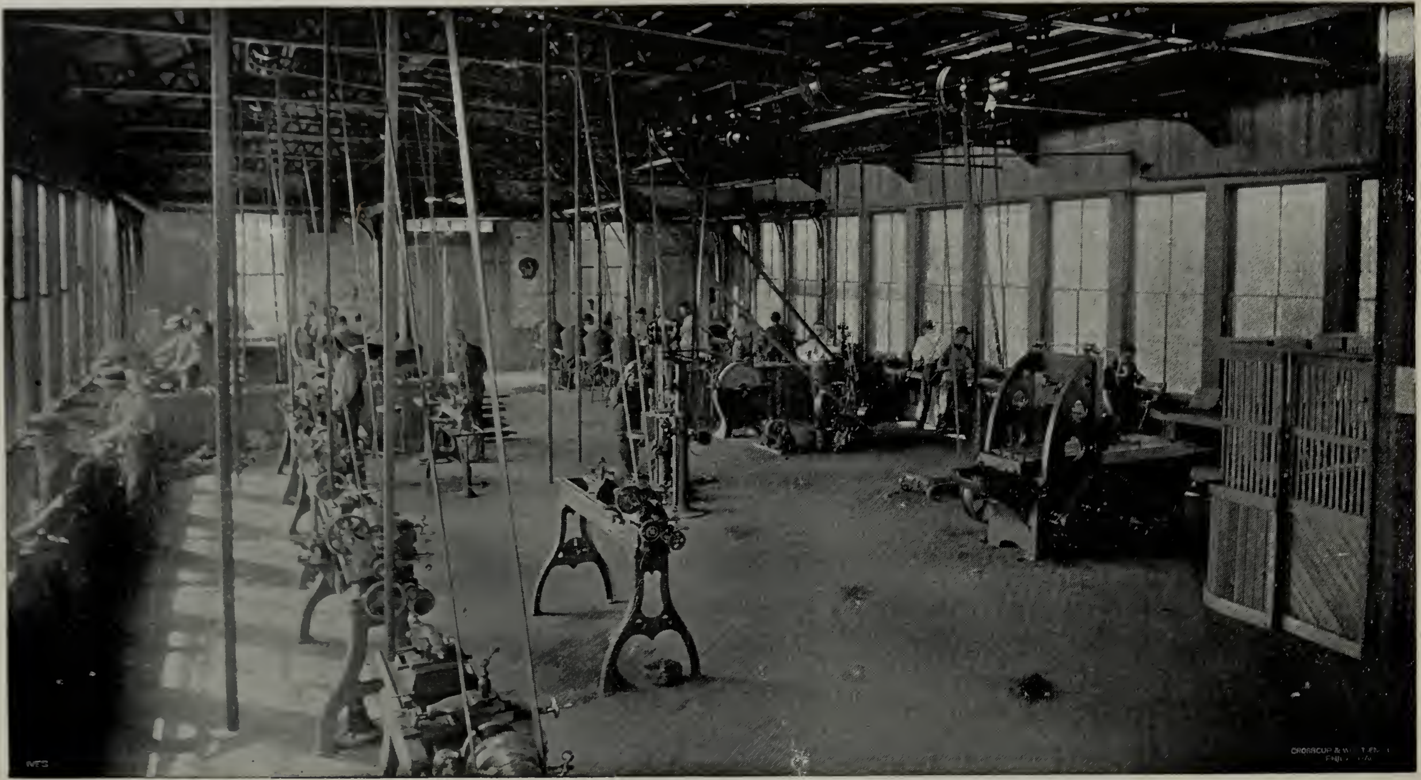
Machine-shop Practice. Second year, fall term. Blacksmithing, graded series of problems in forging, welding and forming under the hammer; designed to teach the management of material and blacksmith tools. Advanced work is given in the working of steel, forging and tempering of tools.

Elementary Analytical Mechanics. Second year, winter term. A course in elementary mechanics, including the laws of motion, force, work, and energy, together with the composition and resolution of forces and moments.

Shop Practice and Lectures. Second year, winter term. Instruction is given in bench and machine work, filing and fitting, and laying out work from drawings, together with simple problems in turning and planing. Lectures are given on machine-shop tools, their use, care, and construction; also, on shop standards and methods.



DRAFTING ROOM.



MACHINE-SHOP.

Hydraulics. Second year, spring term. Lectures on hydromechanics will be given, including problems in flotation, flow from orifices and pipes, together with the measurement of water by weirs and jets.

Shop Practice. Second year, spring term. Machine-shop work on planes, lathes, shapers, milling-machine and grinder, giving general shop practice in the construction of machinery.

Shop Practice and Lectures. Third year, fall term. Shop practice will comprise advanced machine work and the building of fine tools and special apparatus and machinery. Lectures will be given on machine-shop methods of production, cost of work, and arrangement of factories and machinery.

Mechanical Drawing. Third year, winter term. The drawing of this term will begin with exercises in lettering and the making of simple working drawings, followed by construction drawings to scale and the preparation of plates of standard details.

Graphic Statics. Third year, winter term. The graphical determination of stresses in trusses, frame structures, and machines, together with the design of roof trusses and cranes.

Shop Practice. Third year, winter term. Machine-shop practice, together with instruction and practice in the boiler-house and engine-room, the management of pumps, engines, and electrical apparatus.

Principles of Mechanism. Third year, spring term. A study of the fundamental principles of machinery, with special work in gears, linkages, belting, and devices for transmission of power.

Machine Design. Third year, spring term. Designing follows the work in drawing and is based on Low & Bevis's text. Complete designs of simple machines and tools are made, with tracings and blue-prints.

Shop Practice. Third year, spring term. In this term advanced machine-shop work is supplemented by practice in steam- and pipe-fitting as relates to power-house work and heating-systems.

Mechanics of Materials. Fourth year, fall term. This course is based on Merriman's text on engineering materials, with special attention to the mechanics of beams, columns, shafts, and practical problems on the use of construction materials.

Engineering Laboratory. Fourth year, fall term. Engineering laboratory practice will include tests of power by both absorption and transmission dynamometers, engine and boiler tests, calibration of electric machinery, strength of materials, etc.

Foundations. Fourth year, fall term. Practical problems will be given in foundations for machinery, retaining walls for earth, the stability of soils, and construction of earthen dams.

Shop Practice. Fourth year, fall term. Shop practice of this term will include the building of special machinery, such as engines, lathes, and laboratory apparatus.

Applied Mechanics. Fourth year, winter term. A text on applied mechanics, consisting largely of practical problems, will be used to instil the principles of theoretical mechanics.

Engineering of Power Plants. Fourth year, winter term. Hutton's text on mechanical engineering of power plants will be used as a basis for study of the design of engines, boilers, and the details of modern power plants.

Engineering Laboratory. Fourth year, winter term. Advanced work in the engineering laboratory will be given, covering tests of structural materials, the determination of power, hydraulic experiments, calibration of instruments, and tests of electric machinery.

Machine Design. Fourth year, winter term. Beginning with machine parts, the work will include the complete design of machines and the making of working patterns, pattern drawings, and blue-prints.

Shop Practice. Fourth year, winter term. Machine-shop practice in the building of machine tools and testing apparatus for laboratory.

Applied Mechanics. Fourth year, spring term. A continuation of previous term's work, embracing instruction in the application of dynamics to practical problems in machinery and structures, the stresses in machines, elastic properties of materials, hydraulics, power-transmission mechanisms, etc.

Thermodynamics. Fourth year, spring term. Special attention is paid to the theory and underlying principles of the steam-engine, steam-turbine, explosion engines, compressed-air apparatus, and refrigerating machinery.

Machine Design. Fourth year, spring term. Advanced work in the designing of machinery, engines, and tools, attention being given to the development of complete machines for special work.

Thesis. Fourth year, spring term. Engineering students are expected to present, for graduation, a suitable thesis on some subject relating to their work. Practice in the machine-shop is omitted in this term, and it is considered that the thesis work should occupy at least twenty hours per week.

POSTGRADUATE YEAR.

Postgraduate work in mechanical engineering has been arranged with special view of making it available for students of limited means. The department is contantly building machinery and apparatus, and students who have taken the four-years mechanical engineering course are considered sufficiently skilled to be employed in the machine-shop on this work. The fund for student labor does not allow for the payment of high wages, but enough work can be provided to enable the students to pay their expenses while taking one or more years of postgraduate study. The advantage of being able to do postgraduate work and pay expenses at the same time is self-evident, and opportunities to do so are rare. A systematic course has been arranged, which includes the following subjects:

FALL TERM.	WINTER TERM.	SPRING TERM.
Thermodynamics.	Thermodynamics.	Engineering design.
Power transmission.	Steam-engine design.	Advanced mechanics of machinery.
Steam engineering.	Mechanics of machinery.	Experimental laboratory and original investigation.
Laboratory practice.	Laboratory practice.	Thesis.

Variations in the above line of work in the direction of civil and electrical engineering subjects will be arranged for students so desiring.

II.—APPRENTICE COURSE.

Many who are unable to take the four-years engineering course and who wish to learn a trade, will find in the apprentice course opportunities to obtain practical skill in carpentry, blacksmithing, foundry, and machine-shop practice, boiler and engine attendance.

In the apprentice course the advantages of the shops are offered free to a limited number of young men who cannot enter regularly in the College classes. Since instruction rather than money-making is the object of this course, it can be readily seen that the apprentice work under skilled instructors offers many advantages over the ordinary trade apprenticeship. The number that can be accommodated for the coming year is estimated at thirty, and the work given is of the most practical character.

Requirements are as follows: Young men must be at least eighteen years of age, and their attendance on regular College duties must be obviously impracticable, must observe College regulations, must agree to work at least thirty hours per week in the shops, and must remain in the shops for a minimum period of forty weeks. No charge of any kind is made, nor is any pay given to apprentices. All apprentices are taken on one month's trial, that those not naturally suited for such work may be relieved of the necessity of remaining the full period.

The time and requirements given above are the minimum, and apprentices are urged to put in more time than thirty hours per week and to remain for a longer period than forty weeks. This course continues throughout the year and can be entered whenever a vacancy occurs. Apprentices will be given instruction in blacksmithing till forgings can be readily made and the various tools required in machine work can be shaped and tempered. Foundry practice will include regular floor and bench molding of general machine castings, core making, cupola management, brass molding, and the mixing of various alloys. In the machine-shop apprentice students will be advanced through vice work, fitting, filing and scraping as rapidly as possible. This will be followed by general machinists' work on lathes, drill-presses, planer, shaper, milling-machine, universal grinder, etc. The machine-shop regularly builds lathes, grinders, engines, drills and various machines for equipment and for the market. At this work the apprentices gain more than ordinary skill, and in the past the graduates from this course have had no difficulty in securing desirable positions as mechanics.

III.—MANUAL-TRAINING COURSE.

For students of the general course.

The full facilities of the department are offered to students choosing their industrial work in the shops. A definite and progressive course has been outlined, which will give the students a broad understanding of the use of tools and of constructive methods in the working of both wood and iron. The course is in the nature of advanced manual training and is given in all branches of the department, though the amount of time that the student devotes to any branch is entirely optional.

Wood Work. Beginning with simple problems designed for the use of tools, the students are advanced through joining, cabinet-making, turning, general wood work, and carpentry.

Blacksmithing. Blacksmithing is taught in the most systematic manner, beginning with simple forging and welding, and advancing to tool making, tempering, hardening, and general blacksmith work.

Foundry Practice. Foundry practice is given in both floor and bench molding, including the making of cores, brass and iron castings, and the mixing of special alloys.

Machine-shop Work. Machine-shop practice includes bench and machine work in a great variety, chipping, filing, scraping, and laying out of work from drawings, which leads to the machine work required in actual building of apparatus and machinery.

Boiler- and Engine-room. Boiler- and engine-room practice is given to those desiring, and includes firing, care and attendance of engines, pumps, etc.

Pipe- and Steam-fitting. Work in this line is offered in great abundance.

IV.—SHORT COURSE IN AGRICULTURAL MECHANICS AND REPAIRING.

Outline of shop work.

The shop work of this course is a part of the short course in agriculture and mechanics, the full description of which can be found on page 60.

First Term. One winter term of twelve weeks. The purpose of the shop work in this term is to teach students the repairing of farm implements and machinery. Blacksmithing will commence by teaching forging and welding, the construction of clevices and singletree clips, forging of wagon and plow ironware, the sharpening of plowshares, harrow teeth, and general blacksmithing work as is directly useful to the agriculturist. With this work will be included the shrinkage and setting of tires, and repairs of farm machinery, such as reapers, binders, mowers, etc., together with the sharpening of blades and various agricultural implements. Students desiring can take farm carpentry in this first term with special reference to wagon beds, the framing of harrows, making of boxes, cribs, etc. During this term the students will be assisted and encouraged to make a blacksmith forge and necessary tools, that they may take home with them a complete blacksmith outfit at the end of the term.

Second Term. One winter term of twelve weeks. In the second term students will take additional carpentry as applied to wheelwrights' work, the repair of wheels with new spokes, new felloes, the ironing of the same, and more advanced blacksmith work. The care of boilers and engines will be taken up, that agricultural students may be able to operate farm engines and machinery. The building of frame structures such as ice-houses and farm creameries will be given, both by lecture and practical work. Lectures on the strength of materials will be given, that students may intelligently erect such buildings as are most needed on the farm.

In both terms the work of the students will be supplemented by practical lectures on the care and use of farm machinery and subjects of technical interest to agriculturists. It is believed that this work will put the students taking it in a position to make nearly all the repairs necessary on the farm, and will also enable them to do a large amount of constructive work at small cost.

Military Training.

Drill Regulations. During the winter term of the first year the cadets have one lesson per week in the "Drill Regulations of the United States Army." This includes a study of the soldier, the squad and the company, and their organization and movements.

Military Science. Three hours per week are devoted to the study of the elements of military science during the winter term. The recitations and lectures embrace the elementary principles that govern the art of war, the disciplining of troops, military law, the use of the small arms, and, in fact, give a practical knowledge of applied military science, such as an officer of volunteers should be conversant with when called into the field.

Infantry. Special attention is given to setting-up exercises, school of the soldier, company, and battalion, and such ceremonies as parades, reviews, inspections, and guard mounts.

Artillery. Manual of the piece, mechanical maneuvers, and practice firing with blank cartridges.

Target Practice. A good range gives excellent opportunity for rifle practice, which receives considerable attention.

Signaling. A class is instructed each year in the sending and receiving of messages by the flag system in use in the regular army.

The national government has supplied the College with 245 cadet rifles and an equal number of sets of infantry accouterments; also, two three-inch field guns and carriages. Swords, target supplies and annual issues of ball and blank cartridges are also received from the general government. The College furnishes uniforms to all students, to be worn only during the drill hour.

War Department Record. At the close of the year the names of the three cadets most distinguished in military science and tactics are reported to the war department for insertion in the United States army register, and also to the adjutant-general of the state.

Organization. The cadets are organized into a battalion of four companies and a band. The commissioned officers are chosen from the Senior and Junior classes, and the non-commissioned from the Sophomores.

Music.

Recognizing music as a factor in education which is practical and elevating, and believing that the germ of artistic faculty exists in every normal person, the following unique and generous provisions have been made for its introduction into the several courses.

Instruction in music is furnished free, under the direction of the professor in charge, to all students in the College, as follows:

1. *Notation and Theory.* Class "B" meets on Tuesday at 1:30 P.M.; class "A" on Wednesday at 12:20 P.M.

2. Classes in harmony and composition will be formed when the demand justifies their organization.

3. *Vocal Music.* "B" classes meet on Tuesday at the first and third hours, and on Wednesday at the second hour. "A" classes meet on Thursday at the first and third hours, and on Friday at the second hour. A general class meets on Friday at 12:20 P.M.

4. *Instrumental Music.* Instruction upon the piano, organ, violin, mandolin, guitar, flute, clarinet, cornet and the more important orchestral and band instruments is given free to students in the regular courses, under the following restrictions:

5. It may be taken as an elective for the year in place of oratory by members of the domestic science course.

6. *Industrials.* It may be taken as an industrial by ladies only, in connection with their notation and vocal music, after the required industrials of the first year, and after passing an examination equivalent to two terms in vocal music, in which case, one period's daily practice at the College or at home is required.

7. *Extras.* It may be assigned as an extra to students, ladies or gentlemen, who do well in their general course of study, on the same conditions as above, excepting as to practice, when students may furnish their own instruments.

8. Students taking music as an elective will be required to furnish their own instrument if they wish to practice more than one period.

9. *Musical Organizations.* Students who are sufficiently advanced to join the College glee club, College orchestra, special orchestra, or the mandolin, guitar and banjo club, or the elementary band, or the College band, may become members by assignment.

10. All music is optional—is taken at the choice of the student—but after assignment regular attendance is required as at the other classes. Class organization shall be wholly under the control of the professor of music.

11. Music for commencement week and other public College exercises is furnished by the musical department, under the direction of the professor in charge, and all students in the department shall be subject to his call to assist in furnishing the same.

Oratory.

The work in this department is given during two terms in the agricultural and mechanical-engineering courses, and during four terms each in the domestic science and science courses. For the amount of time in each course, see schedule of courses of study.

The aim of this course is to so develop the powers of the student's mind, that he may be able to think clearly for himself and to express his thoughts effectively in oral form. Practical work will be done according to natural and scientific methods. Occasional lectures will be given on topics relating to this department. In all departments, personal criticisms and suggestions will be made in so far as practicable.

1. *Physical Culture.* The system of physical culture consists entirely of movements without apparatus, designed to give health, strength, freedom and grace to the body, in order that it may act quickly and truly in obedience to the highest thoughts, feelings and

purposes of the soul. During the entire course daily drill on the exercises will be given in the classroom. The course is thoroughly practical, and will be of benefit to persons in any walk of life.

2. *Voice Culture.* The voice work is designed to fit the voice to fulfil its highest function, namely, to be a willing servant of the soul, and consists of daily practice on exercises for freedom, flexibility, volume and harmony of voice.

3. *Rendering.* The work in rendering is based upon the natural order of unfoldment in the activities of the human mind, and is in accord with the latest approved pedagogical principles, the aim being to cultivate original thought and to produce that condition of mind and heart which shall result in personal power and character. This is done by bringing the pupil into vital relationship with the masterpieces of the greatest minds, and causing the pupils to reproduce in others the same mental states in which those great minds were when they wrote or spoke. The method is free from mechanical dictation, working always from within outward. The results are obtained entirely by means of arousing the activities of the pupil's mind through concentration upon proper objects of thought. Drill in rendering from the platform selections from standard authors, together with criticism and suggestions for practice, will be given throughout the course. The theory and philosophy of different phases of the work will be set forth as far as may be practicable in the time.

4. *Public Speaking.* Each third-year student is required to appear in public speaking in chapel twice during the year, with declamations. Each fourth-year student is required to appear in chapel once during the year in an original part. For the chapel work the students are prepared by rehearsals with the professor in charge of the department.

5. In addition to the above, assistance is rendered by the department in the preparation of society annuals and class-day program as far as is practicable.

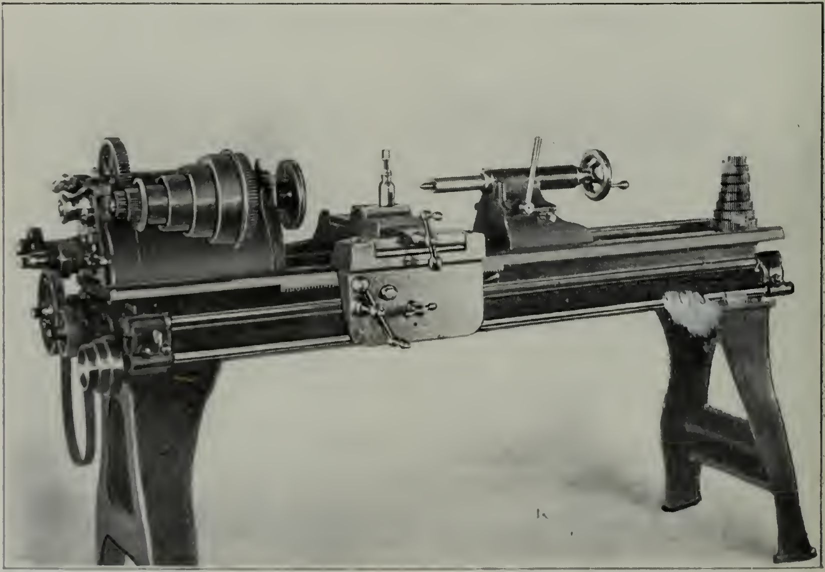
Electrical Engineering Course.

The electrical engineering course is identical with the mechanical engineering during the first three years. In the fourth year the following is offered:

FALL TERM.		WINTER TERM.		SPRING TERM.	
Electricty and Magnetism	5	Sound and Light	5	English Literature	5
History of Industries	5	Applied Mechanics	5	Applied Mechanics	5
Mechanics of Materials	5	Dynamo-Electric Machines,	5	Thermodynamics	5
Electrical Measurements	5	*Electrical Laboratory*	5	*Applied Electricity*	5
Foundations	5	*Machine Design*	5	Electric Power Transmission	5
Shop	5	*Shop*	5	Thesis.	

SURVEYING SQUADS.—IRON AND WOODWORK SHOPS.

BARN AND CORRALS.



FOURTEEN-INCH SCREW CUTTING ENGINE-LATHE, TAPER ATTACHMENT.
Built by students in the shops of Kansas State Agricultural College.

This course is designed to give the student special training which will fit him to meet successfully the problems that confront the practical electrical engineer. The close relationship of the mechanical and electrical engineering courses enables the student to get a knowledge of engine and boiler management and general skill in machine-shop practice and designing. The work consists of lectures, recitations, laboratory practice, and plant testing.

EQUIPMENT.

The equipment consists of apparatus for demonstrations in general physics, and a special equipment and laboratory will be available for engineering students. This will include a complete set of electrical measuring instruments. The distribution of light and power is illustrated by the College heating and power plant.

Physics and Electrical Engineering.

In the following courses instruction is given by text-books, lectures, and experiments. Attention will be called to the practical applications of the principle learned. In all courses special lines of reading will be encouraged, and investigation and experimentation so far as the equipment of the department will permit.

All courses, text-book, Carhart and Chute's Elements of Physics.

1. *Elementary Physics.* First year, spring term. This term's work is intended to give the students a general view of the subject, with such laws and principles as will be useful to them in scientific studies. The importance of accurate observations and conclusions will be impressed.

Engineering courses, text-book, Carhart's University Physics.

2. *Heat.* Second year, spring term.

3. *Magnetism and Electricity.* Fourth year, fall term.

4. *Sound and Light.* Fourth year, winter term.

Agriculture, domestic science and science courses, text-book, Barker's Advanced Physics.

5. *Sound and Heat.* Fourth year, fall term.

6. *Light and Electricity.* Fourth year, winter term.

Electrical engineering course.

7. *Electrical Measurements.* Fourth year, fall term. This course includes practice on the distribution of magnetism, effects of temperature upon magnetism, determination of resistance by various methods, of galvanometer constants, measurements of currents, and electromotive force.

8. *Dynamo-Electric Machines.* Fourth year, winter term. This course consists of the study of the fundamental theory of such machines, of their various forms, and of the practical design and operation of electrical apparatus and machinery.

9. *Electrical Laboratory.* Fourth year, winter term. Advanced electrical testing—the efficiency of dynamos and motors, transformers, coefficients of self and mutual induction.

10. *Machine Design.* Fourth year, winter term. Practice in original designing based on the previous work.

11. *Applied Electricity.* Fourth year, spring term. Study and practice in the application of electricity to bells, telephones, annunciators, etc.

12. *Electric Power Transmission.* Fourth year, spring term. Lectures on central station design and management, electric traction, and transmission of power.

Printing.

Practice Work. The printing department, in the main building, occupies six large rooms, viz.: Superintendent's office, composing-room, pressroom, folding room or bindery, stock-room, and storeroom, all well lighted, amply ventilated, and heated by steam. The printing department affords better facilities than heretofore to the individual student for progress in all that tends to develop the first-class workman. As the printing industrial is open to both sexes, the classes are usually quite large and the stimulus of good example is not lacking; nevertheless, the instruction is of that character in which individual advancement is always taken into account, and opportunity is extended for individual growth in the knowledge of those principles which are of practical utility in the every-day work of a printing-office. Occasion for the gaining of experience and acquirement of skill is supplied by the publication of the weekly *Students' Herald*, the issuing of the monthly *Industrialist*, the execution of the wide range of job printing needed to furnish the various College departments with blanks, quiz and topic lists, lesson outlines and stationery, and the College societies with programs, notices, etc.; thus furnishing a greater range of work for instruction than is ordinarily found in the average printing-office.

The lessons embraced may be briefly summarized under these suggestive topics: The elements of news, book and job composition and imposition; proof-reading and correcting; plain and color presswork; adaptation of various grades of inks and papers; newspaper and magazine folding; wrapping and mailing; tableting of stationery; pamphlet stitching and stapling; and the systematic reading and classification of exchanges. Instruction in the more common technical terms and phrases, names of typographical tools and their uses, preparation of copy, spelling, capitalization, syllabication and punctuation is largely incidental, and in that way receives all the more emphasis, for accuracy in these matters is recognized as of great value in every walk of life.

MEANS OF ILLUSTRATION.

Printing-office, with thirty pairs of cases; large fonts of six-point, eight-point and ten-point Roman type and italics; a good assortment of wood and metal job type and brass rule; a Babcock cylinder press and a New Liberty quarto-medium job press, run by electric motor; a Gordon eighth-medium job press; mitering, rule-curving and stapling machines; paper-cutter, cabinets, stands, imposing stones, etc.

For opportunities for apprentices, see page 91.

Veterinary Science and Zoölogy.

1. *Hygiene of Farm Animals.* Third year, fall term. As the name indicates, this includes a study of the laws of health relating to farm animals, and incidentally also the laws of health relating to the farm home. These two subjects bear an intimate relation to each other. Among the subjects discussed may be mentioned the following, viz.: The laws of health and disease; care of the various organs of the body; influence of climate, soil, and water; impurities and diseases of food stuffs; animal parasites and their life-histories; injurious insects; breeding; quarantining; disinfection, etc. All these subjects are discussed purely as they have a practical bearing on the health of man and beast. This course consists of lectures and reference reading.

2. *Anatomy and Physiology.* Second year, spring term. For students in the agricultural and general courses. The structure of the body, including the form and use of the skeleton and muscles. The form, size and position of the various internal organs are first considered. Following this the various functions of these organs, such as digestion and growth of tissue, circulation of blood and lymph, respiration, secretion, and excretion, the nervous system and the special senses. This subject is taught with its practical application to the laws of health constantly in view. A few dissections of cadavers of dogs and cats are made before the class, and, when practicable, students will be permitted to assist in this work. This course must precede zoölogy, comparative anatomy, bacteriology, and veterinary science. Recitations are from Martin's Human Body, with lectures and illustrations.

3. *Zoology.* Third year, winter term. This includes in a very general way the study of the science of life, protoplasm, the cell theory, etc. Following this, a study of the animal kingdom, its classification, the origin and distribution of animals, etc. This subject will be made as practicable as possible, and every student will be obliged personally to dissect a number of the lower animals, make drawings of the parts, and thus become familiar with the structure of the beings whose interesting physiology he studies. One of the valuable features of this study is the attending development of the powers of observation in a manner that is impossible by any other means. Lectures, recitations, and laboratory work. This study must precede bacteriology and veterinary science. Ten hours a week.

4. *Bacteriology.* Fourth year, fall term. This is bacteriology as applied to the practical problems of life. Special attention is given to the germ life that is active in the dairy and creamery, its relation to the character of the product turned out, the flavor and keeping qualities of milk, butter, and cheese, diseases of these products, etc. Bacteria as nitrifiers in the soil, as agents of fertility and as causes of disease are studied. Students will learn to stain and mount disease germs, examine them under high-power microscopes, to isolate species and cultivate them in artificial food media, and the endless variety of other interesting work connected with the study of general bacteriology. Must precede veterinary science. Lectures and laboratory work.

5. *Comparative Anatomy.* Fourth year, fall term. This includes a study of the anatomy of the horse and other domesticated animals. Special attention will be paid to the structure and functions of the digestive and nervous systems, in such a manner as to be useful to the farmer and stock-raiser. At the same time, the course in this subject will be so taught that it will be preparatory to a complete course leading to the degree of doctor of veterinary medicine, which, it is hoped, we will be able to offer in the near future.

6. *Veterinary Science.* Fourth year, winter term. The aim of this course is by no means to make veterinary surgeons. This it is absolutely impossible to do in so short a time. But with the studies in zoölogy, farm hygiene, bacteriology and comparative anatomy preceding a course of lectures on veterinary science, it is intended to make a young man thoroughly familiar with the ordinary causes of disease and latest successful methods of avoiding and combating them. A few common infectious diseases of farm animals are discussed in detail. The study of lameness of the horse, selection of horses for given purposes, etc., will constitute part of the term's work. Most diseases

of farm animals can be prevented by intelligent foresight. It is our aim to train young men to exercise this foresight. Lectures and recitations.

7. *Histology.* Arrangements will be made to give instruction in the technique of the microscope and in histology to a class consisting of a limited number of students. This class will be open only to such students as do exceptionally satisfactory work in other branches of natural science. This course also will constitute work for which credit will be given in the proposed full course in veterinary medicine and surgery.

MEANS OF ILLUSTRATION.

The zoological museum, containing numerous representatives of the several classes, especially full in fishes and mollusks of Kansas and in illustrations in economic and systematic entomology. Increasing material in skins, alcoholic and anatomical preparations are available also for the use of the student. For veterinary work there is provided a laboratory fitted with apparatus, instruments and reagents for the study and treatment of disease. An Azoux model of a horse, which is dissectible, showing nearly 1000 anatomical structures, skeletons, charts, and a large collection of anatomical specimens, showing healthy and diseased structures.

The Short Courses.

There are large numbers of young people who from lack of means or time are unable to take an extended course of study, but whose usefulness in the world would be much increased by a little special training. Their earning capacity in the household or on the farm is far from what it might be, and they are thus handicapped in the struggle for a livelihood. To bring to this large portion of the "industrial classes," even in small measure, the "liberal and practical education" provided for by the organic act, the College has established certain short courses of study with practice.

The teaching in these courses, while no whit less accurate than in the others, is upon a different plane. Taking students without scientific or mathematical training, the instruction must be more largely a giving of facts, without an elaboration of the underlying principles which the regular courses afford. The work is intensely practical. Studying such texts as any bright young man or woman can understand, receiving lectures of the same type, and putting into daily practice through industrial exercises the facts and principles learned in the classroom, the student cannot but be greatly benefited. It is hoped, too, that in many cases young people who had thought that they could not afford a four-years course will, by this taste of the advantages and pleasures of an education, be led into the regular courses.

These courses are put at the seasons of the year which seem likely to accommodate the most students, those for young men being given in the winter term, when farm work is more slack, and the young women's course being in the fall. Four such courses are now offered: A dairy course of one winter term; a domestic science course of two fall terms; an agriculture-mechanics course and a horticulture-mechanics course of two winter terms. The last two courses are identical the first term, but in the second, one treats horticultural lines more exclusively and the other agricultural.

Persons at least eighteen years of age and of a good moral character are admitted to these courses without examination, but should have sufficient training in the common schools to enable them to understand the simple text-books used, and to handle readily problems in common and decimal fractions and percentage. They will be required to attend strictly and constantly to their duties, or leave. They have the same free use of the College library that other students have. Owing to the peculiar nature of the work and to the slight degree of preparation which it assumes, students are required to be present at the very beginning of the course, and those applying later will not be admitted.

Farmers' Short Course.

A Short Course in Agriculture, Horticulture, and Mechanics.

FIRST YEAR, WINTER TERM, TWELVE WEEKS.

Feeds and Feeding. The properties of feedstuffs and their combinations to secure good returns at least cost with products having the desired qualities: effect of foods on quality of products; construction of farm buildings and appliances to secure best returns from feed and for saving labor; a study of the feeding on the College farm. Text-book: Henry's Feeds and Feeding. Lectures.

Horticulture. General principles underlying plant growth; structure and functions of the various parts of the plants; nutrition, formation of seed, etc.; propagation by seedage, cuttage, graftage, and layerage; environment, including the effects of temperature, light, food, and water-supply; possibilities of improvement by cultivation, training, and selection. Text-book: Goff's Principles of Plant Culture.

Fruit Propagation. Practise work in the various methods of budding and grafting, and storing of the same; treatment of grafted stock during the winter and setting it into nursery rows in spring. The making of herbaceous and hardwood cuttings. Winter treatment of tree seeds in preparation for spring planting.

Entomology. Nature, time and expense of the injuries from insect life, and a knowledge of the remedies, when and how to apply them. Structure of a number of insect types; study of the beneficial insects, and the more injurious forms attacking farm, orchard and garden crops. Use of preventives and insecticides.

Crop Production. A study of the soil, the plant and crop growing, including the management of the soil for maintaining and increasing its productivity, the improvement of worn-out soils, conservation of moisture and the preparation of the soil, selection of the seed, method of planting, treatment after planting and harvesting of Kansas field crops to secure best returns at least cost. Text-book, Bailey's Principles of Agriculture. Lectures.

Bookkeeping. The principles are mastered through their practical application to forms adapted to farm affairs. Each student keeps a regular set of books, in which accuracy and neatness are not less important than a correct understanding of principles. A set of books is developed which would be practical for every farmer, accounts being kept with various departments of his business—fields, granaries, garners, orchards, hogs, cattle, milch cows, etc.

Diseases of Farm Animals. The common ailments of farm animals are discussed, their causes and symptoms explained, and preventives and remedies suggested. Inoculation against blackleg and swine-plague will be performed by the student in his course.

Bacteriology. Characteristics of bacteria, their relation to health and disease of man and animals, to soil fertility, and to quality of dairy products; principles and methods of disinfection.

Blacksmithing. Forging and welding, construction of singletree clips, wagon ironing, clevices, horseshoes, sharpening and tempering ploughs and tools, general repair work. Advanced work is also offered in the care and management of boilers and engines. If the student desires, he can make a forge and set of blacksmith tools to take home with him, paying only for the iron used.

Science Lectures. Lectures will be given in both the first and second years of the course by the instructors on subjects of most interest to the students in this course.

SECOND YEAR.—AGRICULTURAL COURSE.

Breeds and Breeding. Characteristics of the breeds of live stock and their adaptability to Kansas conditions; principles of breeding; form as an index of qualities; selection and judging of live stock. Lectures.

Dairying. Milk: its secretion, nature, and composition; causes and conditions influencing the quality and quantity of milk; handling of milk for the market and for butter-making, including milking straining, aerating, cooling, preserving, and shipping; creaming of milk by gravity methods and by the separator; cream ripening and churning; washing, salting, working, packing and marketing butter. Text-book, Wing's Milk and its Products.

Farm Architecture. Each student will be required to prepare plans, elevations, sections, detailed drawings and specifications of a sanitary farm barn, with outbuildings.

Botany. The laws of plant growth, which have a direct bearing upon the raising of grasses, grains, clovers, forage plants, and weeds; a study of the common fungi that affect cultivated plants; seed testing; practical methods of farm seed breeding.

Physics. A consideration of the principles of physics which underlie farm operations, farm mechanics, control of soil moisture, physical laws of tillage, meteorology. A knowledge of the law of physics enables the farmer to store moisture and to reduce loss of water from the soil by evaporation. It is the practical application of these laws that will solve our drought problem.

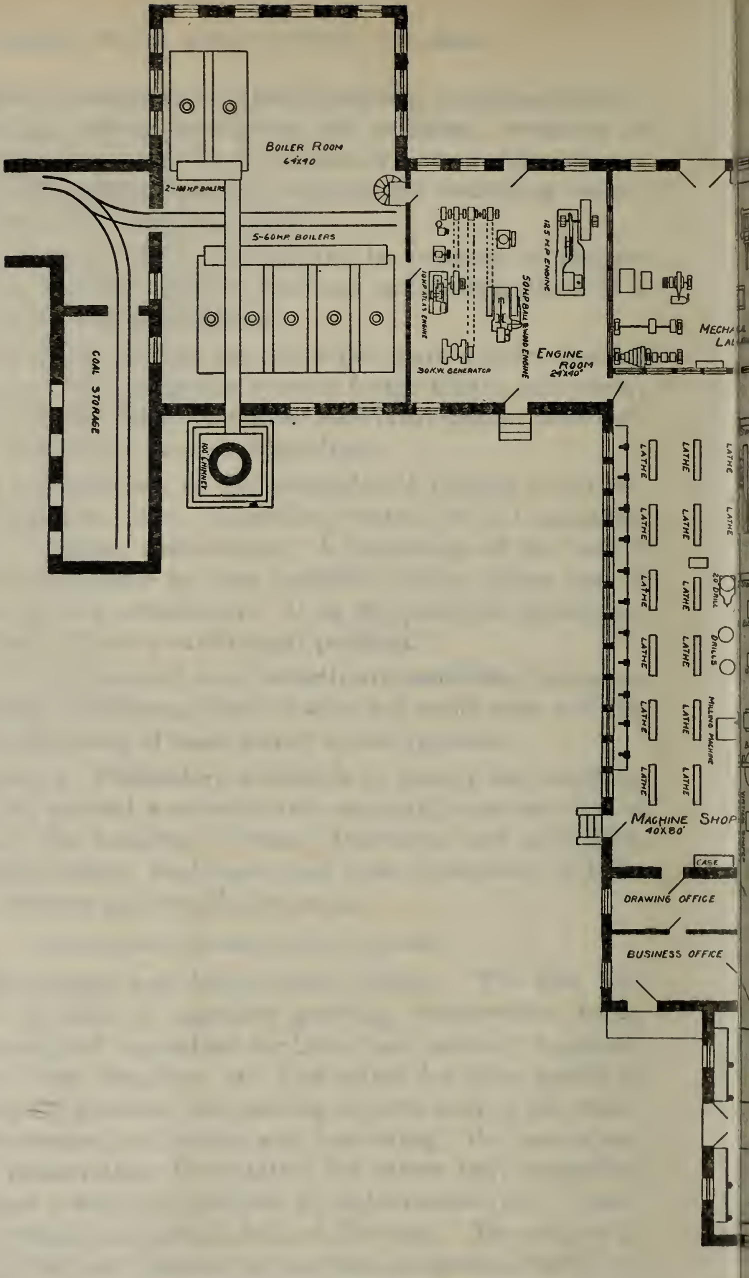
Chemistry. The relation of soils to earth, air, and water, formation and characteristics of different kinds of soils, soil enrichment and improvement, the chemistry of feeds and of animal products.

Farm Carpentry. Elementary woodwork in joinery and construction, followed by general woodwork and carpentry, care and use of farm machinery, the building of frame structures, such as stables, piggeries, poultry-houses, ice-houses, and farm creameries, will be given both by lectures and by practical work.

SECOND YEAR.—HORTICULTURAL COURSE.

Vegetable-Gardening and Small-Fruit Culture. The first half of the term is devoted to vegetable growing, consideration being given to the raising of vegetables for home and market; locations, soils, fertilizers, tools, irrigation, etc., best suited for crops grown in kitchen- and market-gardens; the growing of extra early or late crops, their special treatment, cultivation, and harvesting; the means employed in the preservation of vegetables for future use; vegetables suited to Kansas conditions, methods of improvement, etc. Small-fruit culture occupies the second half of the term. The subject is treated in much the same manner as vegetable-gardening, taking up the cultivation of small fruits and the methods employed in their propagation, handling, and improvement. Five hours per week. Lectures.

Orchard Treatment and Pomology. This branch is devoted to the practical treatment of orchard work; location, soil, planting, pruning,



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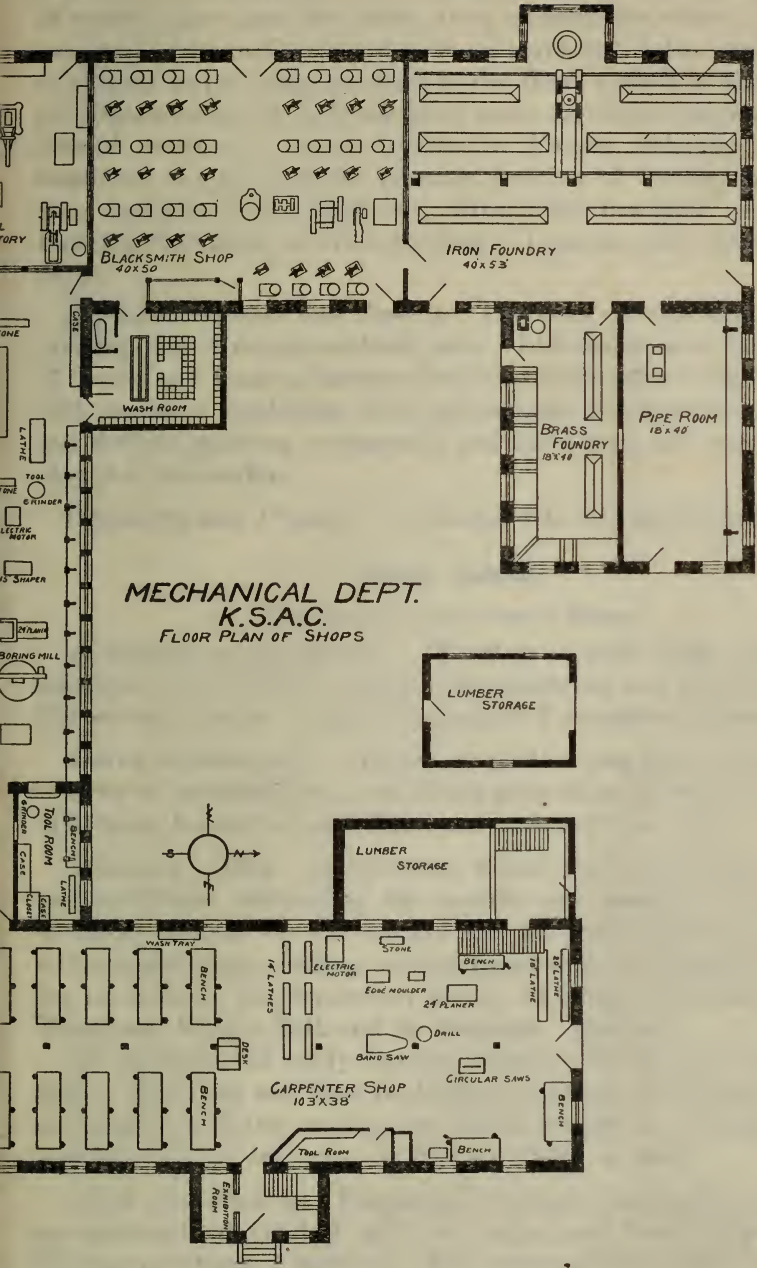

ICULTURAL COLLEGE—FLOOR PLAN OF SHOPS.

cultivation and fertility of the orchard; a study of the use and value of windbreaks—how best made, trees suitable for same in Kansas; causes of plant variation, and methods employed in the improvement of orchard fruits; grape growing in the West, a study of the distinctive characteristics of varieties, their value for home and market use; lists of varieties of fruits suitable for Kansas orchards; a general treatment of planning the grounds, location of houses, barns, gardens, orchards, lawns, fields, etc. Five hours per week. Text-book, Bailey's Principles of Fruit-growing. Lectures, with library references.

Orchard Diseases and Insects. The work of this branch is the investigation of various orchard pests. Life-history and depredations of insects and fungus diseases attacking horticultural crops, together with means of combating them, preventives, and remedies; mechanical devices, spraying compounds and machinery, and methods employed in the warfare.

Chemistry and Physics. In classes with the agricultural course.

Dairy School.

ONE WINTER TERM, TWELVE WEEKS.

Principles of Agriculture. Treating of soils, crops, tillage, and manures; the selection, laying out, equipping and management of Kansas dairy farms. Text-book, Bailey's Principles of Agriculture.

Dairy Bookkeeping. Practice in bookkeeping that will enable the student to understand the underlying principles, followed by training in keeping books for farm, dairy, and creamery accounts.

Dairying. Milk: its secretion, nature, and composition; causes and conditions influencing the quality and quantity of the milk; handling of milk for the market and for butter-making, including milking, straining, aerating, cooling, preserving, and shipping; creaming of milk by the separator; cream ripening and butter-making. Text-book, Wing's Milk and its Products. Lectures.

All students will study dairying together for the first half of the term. This class will then be divided, creamery men taking lectures on *Creamery Butter-making*, the cheese-makers on *Factory Cheese-making*, and the dairymen on *Private Butter-making*.

Feeds and Feeding. Properties of common feed stuffs, their effect on character and yield of milk and butter, and their adaptability to Kansas conditions of dairying. The compounding of dairy rations to secure good yields at least cost with products having desired qualities. Careful study of the feeding of the College dairy herd will also be required. Text-book, Henry's Feeds and Feeding.

Breeds and Breeding. Characteristics of leading breeds of cattle, and their adaptability to Kansas dairy farming; dairy farm, and the selection of dairy animals; care and management of the dairy herd; principles of stock breeding. Lectures.

Bacteriology. Relations of bacteria to methods of keeping milk, ripening cream and cheese, and flavoring butter; diseases of milk, their relations to the health of man and animals; principles of disinfection. Text book, Russell's Bacteriology. Lectures.

Diseases of Dairy Cattle. The common ailments of calves and dairy cows are discussed and their causes and symptoms explained, remedies and preventives suggested, all from a practical farmer's standpoint. During the dairy school the College herd will be tested with tuberculin and the students taught how to make the test. Students will also inoculate hogs against cholera and swine-plague. Lectures.

Boilers and Engines. Lectures and practice in the firing of boilers, care and running of engines, pumps, etc. Care and attendance of refrigerating machinery, practice in shops.

Butter-making and Milk Testing. Practice in handling milk and its products from the time it leaves the cow until it is marketed as butter, cheese, or sanitary milk. Students may choose either creamery butter-making, cheese-making, or private dairying. Thorough instruction and practice will be given in all three of these lines. The dairy rooms will be fully equipped with hand and power separators, Babcock tests, churns and butter-workers, aerators, heaters, sterilizers, refrigerating machinery, milk and cream vats, factory-cheese apparatus, Mann's acid tests, and other needed apparatus. Many manufacturers have volunteered to loan us machinery, so that the dairy students may make tests of the work of the different makes of separators, churns, etc.

EQUIPMENT.

One hundred dairy cows, a herd of calves being raised on skim-milk, 200 hogs fattened on skim-milk and grain, 100 fall pigs having skim-milk in their ration. A dairy barn for 100 cows. A model dairy-school building, two stories and basement, 100x105 feet, with butter, cheese, milk and testing rooms, cheese-ripening cellars, refrigerating plant, and cold-storage rooms; all apparatus needed for milk testing and for handling milk from the cow through the creamery to the butter tub or cheese room. Students in the dairy course have free use of the College library, containing 19,704 bound volumes and about 14,600 pamphlets, and in which are kept on file all the leading dairy and farm papers. The students' farmers' club meets weekly to discuss farm questions and furnishes a valuable part of the education offered.

EXPENSES.

Tuition is free. Board and rooms can be secured for $2.50 and upward per week; lunches may be had at the College dining-room at cost; laundry costs about fifty cents per week. Each student will need two white suits and caps for use in the dairy room. These can be purchased in Manhattan. Unnecessary breakage will be charged at cost. Incidental expenses will be high or low as the individual determines. The total of all expenses for the entire time, exclusive of railroad fare in coming and returning, need not exceed forty dollars, and with close economy may be made less. Students in the dairy course cannot expect to earn any part of their expenses while at the College, as every hour will be needed for class work, practise, or study.

Short Course in Domestic Science.

FIRST YEAR, FALL TERM, TWELVE WEEKS.

Lectures and Practice in Cooking. This work includes the following topics: The origin and purpose of cooking, and the effects of heat and cold upon starch and albumen; direct application of the principles learned to the cookery of eggs, vegetables, beverages, and soups; the general cookery of meats, with study of the meat charts; baking-powders, their composition and adulteration; yeast, and bread-making by fermentation.

Drawing. The work in drawing is especially adapted to the needs of this class of students; it will consist of free-hand and geometrical drawing.

Sanitation and Household Accounts. Care of the kitchen, living-rooms, sleeping-rooms, dining-rooms, etc., including the cleaning of kitchen utensils and lamps, sweeping, dusting, and care of plumbing. A simple method of keeping accounts of receipts and expenditures will be given.

Sewing. Pupil makes a model book covering the full course in hand sewing, and consisting of basting, gathering, darning, patching, etc. Machine practice, drafting, cutting and making underskirt and drawers; drafting, fitting and making dress without lining; cutting and making corset cover and night-dress.

Materials for the model work will be furnished by the College. Each pupil will furnish her own material for the garments, but if sufficient proficiency is shown in making the first garment, pupils may be allowed to take orders for the others.

Vegetable-gardening and Floriculture. The first half of the term is devoted to vegetable growing. Subjects treated include the raising of vegetables for home and for market, with location, soils, manures, tools, irrigation, etc., best suited for crops grown in kitchen-

and market-gardens; the construction and manipulation of hotbeds, cold-frames, and winter gardens; the growing of early and late crops, their special treatment, methods of cultivation, planting, transplanting, harvesting, and marketing; a study of varieties suitable to local conditions; and the origin, nature and methods of improvement of vegetables. The last half of the term is devoted to floriculture. Lectures in the classroom are supplemented by practical exercises in the greenhouses and gardens, treating of the propagation and culture of flowers, including the treatment of seeds, cuttings, mixing of soils potting, repotting, watering, cut flowers, packing, and the many operations that attend amateur and commercial flower-gardening.

SECOND YEAR, FALL TERM, TWELVE WEEKS.

Lectures and Practice in Cooking and Home Nursing. The following subjects are taken up: The food principles and their classification; the uses of food in the body; canning and preserving; cookery of the various combinations made with eggs, thus involving the application of heat to albumen; simple chemistry of bread-making, rolls, puddings, etc.; practical lessons in frying and in cookery of salads, plain pastry, dessert, and cake; a series of six lessons in invalid cookery, including gruels, toast, beef tea, soups, eggs, and milk; and six lessons in home nursing.

Physics. The subjects of mechanics, sound, heat, light and electricity will be briefly treated by lectures, especial attention being given to heat in its relation to cooking, ventilation, etc.

Chemistry. By means of lectures, accompanying a single text-book, the attempt is made to give the students some idea of the nature of chemical action, and to impart the facts most directly bearing upon cleaning, sanitation, cooking, and nutrition. A weekly written quiz is a part of the work.

Bacteriology and Physiology. Characteristics of bacteria and their relation to health and disease, to quality and preservation of foods, principles and methods of disinfection; physiology and hygiene of the human body; laws of health and care of the sick.

Dressmaking. Pupil will be taught to adapt and use pattern taken from pattern sheet, also use of dress-cutting system, cutting, fitting and making woolen dress. Pupil will furnish her own material for the first dress, but if sufficient proficiency is shown she will be allowed to take orders for the others.

General Information.

Examinations.

Examinations for admission are held at the beginning of each term, as shown in the calendar of the college year. Applicants at other times during the school year have special examinations. These examinations are chiefly written, and a grade of seventy per cent., at least, must be obtained to pass a study.

Examinations in the courses are held twice each term, as announced in the calendar. The results of these examinations, marked on a scale of 100, are combined with the grades of the preceding daily exercises into a grade for the period. Grades reported to the Secretary for record are made up by giving the mid-term record a value of one-third and the record for the last half of the term a value of two-thirds. For passing a study, the mean grade so calculated, and also the grade for the last half of the term, must be at least seventy. Any student receiving less than a passing grade on two or more studies may either drop back a year or withdraw from the College. Any student may receive a certificate of standing, upon leaving College at the close of a term.

Students deficient in entrance studies must make good such deficiencies before entering on the work of the second year. Students are not catalogued in the third-year class unless all deficiencies of the preceding years are provided for. Candidates for graduation must make good all deficiencies before entering on the work of the spring term of the fourth year.

After entering college, students are allowed special examinations only upon recommendation of the professor in charge, and by permission of the Faculty. Permission for examination in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive. Students desiring credit for work done elsewhere must bring certificates and catalogues to show that the work done is equivalent to ours.

Terms of Admission.

Applicants for admission must be at least fourteen years of age. The courses, given elsewhere, are based on the following entrance requirements: Reading, spelling, writing, geography, arithmetic, United

States history, English grammar, English composition, elementary physiology, bookkeeping, and algebra through simple equations of one unknown quantity. It is recognized that only the very best rural schools will prepare students for unconditional entrance, and the College will therefore maintain preparatory classes under experienced teachers for the instruction of such as are unable to fully pass the entrance requirements. Applicants over eighteen years of age, who for lack of early advantages are unable to pass even the common-school branches, may, under special conditions, be admitted to preparatory classes, but all others will be expected to pass them.

Examinations for admission are held at the beginning of each term. Applicants at other times during the school year have special examinations. These examinations are chiefly written, and a grade of seventy per cent., at least, must be obtained to pass a study.

On entrance, applications for advanced standing in the courses or for credit for certain studies of the courses may be made to the chairman of the Committee on Examinations. After entrance, such applications should be made to the professor in charge of the study. In any case the applicant will be required to pass such an examination as the professor in charge deems necessary.

Applicants may receive credit without examination for such entrance requirements as may be covered by the following:

1. Grades of at least seventy per cent. on a Kansas teacher's certificate.

2. Diploma received on completion of a county course of study which has been approved by the Faculty.

3. Certificate of passing the grammar grade, or graduating from the high school, of any city with a course of study approved by the Faculty.

The courses of the following cities and counties have been approved by the Faculty, and others may be submitted at any time:

CITIES.

Abilene.
Alma.
Anthony.
Argentine.
Arkansas City.
Atchison.
Augusta.
Baldwin.
Belleville.
Beloit.
Burlingame.
Burlington.
Caldwell.
Chanute.
Cherryvale.
Chetopa.
Clay Center.
Clifton.
Coffeyville.
Columbus.
Concordia.
Council Grove.
Dexter.
Dodge City.
El Dorado.
Ellsworth.
Emporia.
Eureka.
Fort Scott.
Fredonia.
Garden City.
Garnett.
Gaylord.
Girard.
Great Bend.
Hiawatha.
Holton.
Horton.
Humboldt.
Hutchinson.
Independence.
Iola.
Junction City.
Kanopolis.
Kansas City.
Kingman.
La Cygne.
Larned.
Lawrence.
Leavenworth.
Lebo.
Lincoln.
Lyons.
Manhattan.
Mankato.
Marion.
McPherson.
Minneapolis.
Neodesha.
Newton.
Olathe.
Osage City.
Osborne.
Oswego.
Ottawa.
Paola.
Parsons.
Pittsburg.
Pomona.
Pratt.
Russell.
Salina.
Scranton.
Sedan.
Seneca.
Solomon City.
St. Mary's.
Topeka.
Valley Falls.
Wamego.
Washington.
Waverley.
Wellington.
Wellsville.
Winfield.
Wichita.

COUNTIES.

Allen.
Anderson.
Barber.
Brown.
Bourbon.
Butler.
Chase.
Cherokee.
Clay.
Cloud.
Cowley.
Dickinson.
Doniphan.
Douglas.
Elk.
Ellis.
Ford.
Franklin.
Geary.
Greenwood.
Harper.
Harvey.
Jackson.
Jefferson.
Jewell.
Johnson.
Kingman.
Labette.
Leavenworth.
Lincoln.
Linn.
Lyon.
Marion.
Marshall.
McPherson.
Miami.
Mitchell.
Montgomery.
Morris.
Nemaha.
Neosho.
Ness.
Osage.
Osborne.
Ottawa.
Phillips.
Pottawatomie.
Republic.
Reno.
Rice.
Riley.
Rooks.
Rush.
Russell.
Saline.
Sedgwick.
Shawnee.
Smith.
Sumner.
Wabaunsee.
Washington.
Wichita.
Wilson.
Woodson.
Wyandotte.

COUNTY HIGH SCHOOLS.

Atchison and Dickinson.

Counties and cities on the accredited list may be called upon at any time to furnish evidence that they are maintaining a satisfactory standard of scholarship.

The studies of the first year, and many of the second, are taught in two or all of the terms of the year, and not simply in the terms shown in the schedule, so that students who enter deficient in a term's work on entrance studies will go right on with first-year work the next term. It is quite possible for a good student who enters somewhat behind to make up his deficiency in the course of a year or two and graduate in four years.

Students should make every effort to enter on the first day of the term. Those entering later will be at a serious disadvantage, and if more than two or three weeks late should expect to take review work or fewer studies. If unable to enter before mid-term it will be better to wait until the next term.

Hospitants.

That mature persons not able to attend College continuously may nevertheless be able to enjoy, in a measure, the privileges of the institution, an invitation has been extended to all citizens of Kansas who may be so disposed to visit the College, its lectures, laboratories, library, shops, and various departments, and to avail themselves as fully of its advantages as may be consistent with their wishes, with the needs and duties of the regular students, and with the harmonious and successful working of the institution. Following are certain rules concerning hospitants:

Persons regularly attending any of the classes of the Kansas State Agricultural College, without assuming the regular duties of students, will be known as hospitants, and—

1. Must be persons of mature age, whose attendance on regular College duties is obviously impracticable.
2. Must be properly enrolled at the President's office.
3. May attend any of the regular classes of the institution, subject to the same regulations, with regard to punctuality and attendance,

as are imposed upon regular students, except as to recitations and examinations.

4. May use the library, as regular students.

5. Are not entitled to laboratory privileges without special recommendation of the professor in charge and the permission of the Faculty.

General Duties and Privileges.

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character, by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week-day except Monday, and no student may be absent without excuse. Students cannot honorably leave the College before the close of a term, unless excused beforehand. A full and permanent record of attendance and scholarship shows to each student his standing in the College.

Chapel exercises occupy fifteen minutes before the meeting of classes each morning, and absence from them is noted.

Every Saturday, at 1:30 P. M., the whole body of students gathers for a public lecture, or for rhetorical exercises of the third- and fourth-year classes.

Systematic training in gymnastic and calisthenic exercises is provided for both young men and young women, under teachers appointed by the College.

There are four prosperous literary societies, which meet weekly, in rooms set apart for their use. The Alpha Beta, open to both sexes, and the Ionian, for young women, meet Saturday afternoon. The Webster and the Hamilton admit to membership young men only, and meet on Saturday evening.

The Students' Farmers' Club meets weekly to discuss farm questions, and furnishes a valuable part of the education offered.

A Science Club, and an Engineering Club, conducted largely by the students, afford valuable opportunities for the preparation of original articles and reviews of progress in the arts and sciences.

The Young Men's and the Young Women's Christian Associations hold weekly meetings. They appoint reception committees to meet new students at the trains, to assist them to find suitable boarding places, and to aid them in various ways. The two associations publish, for free distribution, a handbook containing a map of the town, information concerning the College, and other matters of interest to students.

At various times during the year the College halls are opened for social or literary entertainments for the whole body of the students, or for classes. For the last two years the students have organized and presented courses of entertainments, which have been of high value, and of a moderate expense to each individual.

Earning One's Way.

The courses of study are based upon the supposition that the student is here for study, and a proper grasp of the subjects cannot be obtained by the average student unless the greater part of his time is given to college duties. Students in straightened circumstances are encouraged and aided in every way possible, but unless exceptionally strong, both mentally and physically, are advised to take lighter work by extending the course, if obliged to give any considerable time to self-support. As a rule, students should be prepared with means for at least a term, as some time is necessary for one to make acquaintances and learn where work adapted to him may be had. Sometimes arrangements may be made in advance.

The lines in which employment may be had are various. The College itself employs student labor to the extent of about $900 per month, the rate paid being ten cents per hour. This work is on the farm, in the orchards and gardens, in the shops and printing-office, for the janitor, etc. As one's ability and trustworthiness become established, more responsible and more remunerative work may be had to a limited extent. Many students obtain employment in the town; some work for their board in families in town or in the country near the College. Labor is everywhere respected, and the student who earns his way is honored by all. He will necessarily have little time for the lighter pleasures that may be made incident to college life.

Expenses.

Tuition is free to all, irrespective of residence in Kansas; and no fee for incidental or contingent expenses is charged. Board and washing are not furnished by the College. Board, with furnished room, can be procured in private families at from $2.50 to $3.50 per week, or table board in student clubs from $1.50 to $2.25 per week. Furnished rooms, without board, can be obtained at from $3.50 to $5 per month. Some students board themselves at even less cost, and rooms for the purpose can be obtained at a rent of from $1 to $3.50 a month. Washing costs from 50 cents to $1 a dozen pieces. Ordinary expenditures, aside from clothing and traveling expenses, range from $100 to $200 a year. No institution in the state furnishes an education at less cost to the student.

Business Directions.

General information concerning the College and its work, studies, examinations, grades, boarding places, etc., may be obtained from the President or the Secretary.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid from the office of the Treasurer.

All payments of principal and interest on account of bonds or land contracts must be made to the state treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The Industrialist may be addressed through Acting Pres. E. R. Nichols, managing editor. Subscriptions are received by Supt. J. D. Rickman.

Donations for the library should be sent to the Librarian; donations for the museum, to the chairman of the Committee on Museums.

Applications for farmers' institutes should be made as early in the season as possible, addressing Institute Department, Kansas State Agricultural College.

Applications for the publications of the Experiment Station, and general inquiries concerning its work, should be addressed Agricultural Experiment Station; but correspondence concerning special lines of investigation should be sent to the member of the Council in charge of such work.

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